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Address

CHEMICAL PROBLEMS IN HOSPITAL PRACTICE.*

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I.

This subject is not a purely scientific one. I shall have something to say about problems, more specifically about biochemical problems related to medicine; but a discussion of "Chemical Problems in Hospital Practice" necessarily also implies a consideration of the conditions which obtain or which might obtain for biochemical research in hospitals.

The first question asked in connection with any scientific problem naturally is, Is it a practical one? Is it a problem which offers a reasonable prospect of yielding tangible positive or negative results? Clearly, the experience and judgment with which the free and unhampered investigator answers this preliminary question determines, in no small degree, his success in research. In no other branch of experimental science does keen discrimination in this respect meet with greater rewards than in biologic chemistry, and in no other science probably is the lack of this discrimination more frequently encountered.

It is not difficult to find reasons which would seem adequately to account for this condition. Biologic chemistry is full of the most important, fundamental, and alluring problems. Many of these are at the same time important problems of agriculture, bacteriology, pathology, physiology or medicine, and most of them are easy to see and understand, at least in hazy outlines. The inevitable consequence is that from all these departments men of every shade of experience and training have been drifting into biologic chemistry and are working on biochemical problems. But the tools, the methods which are indispensable alike for an adequate understanding of the details of the problems and for effective work on those details, are integral parts of a science, the main facts and principles of which can be mastered only by years of diligent study. It is a plain fact that without a reasonable proficiency in the use of the tools the workmanship must be poor. Some questions in biologic chemistry can be and, of course, are being settled by the help of comparatively simple technic and by men of very limited chemical knowledge and experience. But the larger problems, the systematic working of the important fields of biochemical research, call, almost without exception, for all the ingenuity, resourcefulness and critical judgment of the trained chemist.

Biologic chemistry is now in practice a recognized independent branch of experimental science. It is pre-eminently a field for research, pre-eminently a field for which a large body of men should be specifically trained, yet it is one into which most of the present workers have drifted by chance after their student years proper were over. There is now in this country an extraordinary demand for proficient physiological chemists, yet only one university has made effective provision for meeting this demand. The universities are still turning out doctors of philosophy in chemistry who also know considerable physics and geology, but none or practically none who are familiar with any branch of biology. And the medical schools are still graduating only physicians. They doubtless believe heartily in the importance of the medical sciences, but they are only just beginning to understand that the development of those sciences demands suitably trained specialists, specialists who can not grow up in sufficient numbers on the basis of personal initiative alone.

I am not prepared to say that this condition is peculiar to biologic chemistry; it may exist in other sciences as well, and if so may be chiefly a reminder of the fact that it was only yesterday when we had no universities, no schools for the development of specialists in any science whatever. The fact that our first physiologic chemist is still in his early fifties certainly indicates that these are pioneer days in biologic chemistry. This may explain but does not alter the fact that we have as yet no machinery for the development of biologic chemists, and therefore have no reason to expect that the demand for such chemists can be met.

It may be thought that this condition, though unfortunate, can not have much to do with the subject of this paper. It is unfortunate and, moreover, it has a great deal to do with that subject.

Whether a given scientific problem is practical or not, whether it is workable or not, depends not only on the character of the problem itself, but also on where the work is to be done and who is to do it. It is useless to dream that chemical problems can be solved in hospitals unless the hospitals have men and equipment for work on those problems. Those familiar with the present conditions of supply and demand in biologic chemistry know that men are not now to be had. During the past two or three years almost every biologic chemist in this country has had the opportunity of making a change. And there is no waiting list. The hospitals have, however, cut no appreciable figure in the creation of this condition. At present they have neither men nor equipment for chemical research. They have not even begun to make any effective demand for such work. Notwithstanding the present popularity of biochemical research, notwithstanding the general confession of belief in its importance, it still remains to be seen whether hospital staffs really want it.

* Lecture delivered before the Harvey Society, New York, Feb. 22, 1908.

Yet the time will surely come when the medical profession will recognize in practice, as it already does in theory, that the large city hospitals should also be centers for biochemical research. The destructive and regenerative processes at all times to be found in large general hospitals constitute one of the most important fields for unceasing biochemical investigation, and into this field should be called the most able men to be found anywhere. Extensive investigations in this region are as important for the advancement of physiology as for the advancement of pathologic chemistry and medicine, for in disease, as in health, physiologic processes play an important rôle. Indeed, the most direct and important aim of biochemical investigations must be the advancement of our ability to differentiate between the physiologic and the pathologic, and this can be done only when the investigator is as alert for new points or false teachings in the domain of the physiologic as in that of the pathologic.

It is a mistake to think that clinical men in the hospitals can either do or direct such chemical work. They have the most valuable material for biochemical investigations in their possession. Out of the abundance of such material they have made occasionally in the past, and in the future they will occasionally make, observations which can be worked up into distinct contributions to pathologic and physiologic chemistry. But without adequate provision for the thorough sifting and critical investigation of the observations of the clinicians, most of their impressions must remain hopeless mixtures of the correct, the probable and the impossible. The chemical work on hospital problems must be done by officers on the ground, by men who are in a position to know the available material, and who have the necessary aid of nurses, assistants and hospital funds; but they must also be men who work on the problems with their hands as well as with their heads.

For no matter how well a given piece of work is planned, no matter how clear and plausible the theory of it may appear, the investigator needs to be critical, skeptical and alert at every stage of the work.

The finest discoveries, the most valuable hints obtainable from a given investigation, are often enough of the most unexpected kind, and often come at the most unforeseen times to him who is really steeped in the work. But steeped in the work a supervisor never is, least of all a clinical supervisor, and rarely is the man who works at a supervisor's problems.

No supervisors or directors are needed for the work. Independence is a necessary prerequisite for originality in research, and the lack of it in so many American laboratories outside of the universities must, in part, be held responsible for much poor research and for the continuous employment in research positions of men who never have done and who never can do independent work. Not only does the successful research chemist not need a director; he should not be called on to become one. Provide a well equipped hospital laboratory, even, if necessarily, a small one, some current literature, and one or two assistants. Then give the worker the freedom which he should have earned in order to get the position, and the maximum service for the advancement of biologic chemistry will be easily and readily obtained.

II.

Given these ideal conditions for work, what are the problems which the hospital chemist might be expected to take up?

This is a fair question, yet it is a question which no one man should try to answer in full. There should be no difference of opinion on this point, for when a really practical problem is once clearly and correctly formulated, a most important step toward its solution has already been taken. Each chemist will have his own problems and would be likely to use those problems as a starting point at least; and no one, certainly no one else, can foretell where they would lead or where they would connect with the problems of the clinicians.

I shall confine myself to the field of metabolism. So far as I can see there is no more urgent, no more promising line of investigation on hospital material at the present time.

The problems of metabolism have so frequently been the subject of popular lectures that I can hope to tell you little that is new or that you have not heard before. Still every worker in the field has his own point of view and his own ideas of the relative importance of the different problems and of how they should be attacked.

The dominant idea in the field of metabolism for more than a generation past may be characterized by two words—nitrogen equilibrium. The conception of nitrogen equilibrium has been the illuminating center from which practically all the metabolism work of the past has originated and to which it has almost invariably returned. It is not to be denied that much excellent work has been done under the inspiration of this conception. I would not minimize the importance of the principle, nor count as useless the premature and, as we now know, unsuccessful efforts of the past thirty years to make it the guide and foundation of dietetics; nor do I fail to see that valuable work is still to be done on the basis of this principle. Nevertheless, it is my belief that in the metabolism work of the future we will do well to step out, in a measure at least, from under the influence of the principle of nitrogen equilibrium.

It is no longer to be questioned that protein metabolism in the animal body can be subdivided into tissue metabolism and the metabolism of inert food protein. This dual conception of protein metabolism is, in my opinion, no less important than the principle of nitrogen equilibrium, nor is the essence of it altogether new. From the experimental standpoint, these two conceptions have, however, been mutually exclusive, and so long as all the competent investigators persisted in making nitrogen-equilibrium experiments they could learn nothing of the tissue metabolism. The metabolism studies of the past have been essentially studies of the katabolism of the food protein. The metabolism work of the immediate future, as I see it, should first and foremost be directed toward a study of the katabolic processes which are less dependent on the daily supply of food protein.

Whatever our attitude may be toward the question as to what constitutes the necessary or the most advantageous consumption of protein for different classes of normal persons, the one fact which, to my mind, stands out clear and full of promise is that for limited periods, for periods as long as those of many acute diseases, and for experimental purposes, the question of nitrogen equilibrium can safely be left out of consideration. This one fact has done away with the necessity for indiscriminately stuffing patients with the precursors of urea and uric acid. It has opened the way for greatly enlarged possibilities of feeding the sick for therapeutic purposes, and it should remove the deadening influence which the monotonous condition of nitrogen equilibrium

has for a long time exerted on experimental metabolism investigation.

The metabolism work which is now called for must largely be done on hospital patients. Every class of clinical material to be found in general hospitals must be searched thoroughly and standardized as to its tissue metabolism and without regard to the chemical records of the past, for those records represent a different point of view, and they were obtained under unsuitable conditions and by means of inadequate analytical methods. It is not necessary, I think, to be an unreasoning enthusiast or to entertain illusions in order to believe in this work. Some of it, a great deal of it perhaps, may yield nothing of direct value to clinicians, but that which has no value to them is exactly the material which can be used from the physiologic standpoint. This line of work is still in its infancy, and from the standpoint of physiologic chemistry, as well as from that of pathologic chemistry, we need large numbers of exact and detailed metabolism experiments, performed expressly for the purpose of throwing light on tissue metabolism.

I venture to predict that we shall learn more concerning the abnormal or subnormal metabolism of the sick on the basis of kreatinin and kreatin determinations alone than could be learned in another thirty years by means of the nitrogen determinations of the past. Exact quantitative work is, however, the only kind that is not worse than useless. It is only a waste of time to work on any patient from whom exact twenty-four-hour quantities of urine can not be obtained. The height, weight, muscular development, even the sex of the person, is of importance in the study of tissue metabolism. The diet may be anything that may seem desirable, except meat products, provided that sufficient control experiments are made. The ideal diets for experimental purposes are, however, those which contain sufficient fuel value and minimum quantities of nitrogen.

While this line of work now seems as definite and clear cut as it is promising, it would, in my judgment, be an error to plan anything grand or "American" for its execution. The factory plan, almost always out of place in research, is certainly out of place here. We have only made a beginning in the study of tissue metabolism, and to get the real value out of the work we must avoid the routine and the mechanical, and must constantly be on the alert for the errors or the unknown gaps in the present conception of tissue metabolism. We do not yet know to what extent urea, uric acid, and the so-called neutral sulphur, and undetermined nitrogen, play a part in this metabolism, and every worker in the field should work leisurely enough and critically enough so that every new point of attack, every new clue to a more complete understanding of the subject will be utilized to the full extent of its possibilities. We need a large number of independent workers in this field.

Every kind of well-defined clinical material calls for renewed investigation from the standpoint of the dual protein metabolism. It is impossible to tell beforehand where the most important findings will be discovered. It is practically certain, however, that the field of the common acute fevers will yield important results. The enormously accelerated protein katabolism in fever, and the peculiar proportions of the different waste products obtained in the urine from fever patients makes as valuable material for constructive theoretic work on metabolism as I know of. A beginning has already been made on the investigation of this material. There are now, I think, at least three papers from as many different laboratories in process of preparation on the metabolism of typhoid fever. And from what I know of the results obtained, it seems safe to say that they will call forth many additional ones. This work has, I think, a direct bearing on hospital practice, for it should show why some diets ought to be better than others for this class of patients.

It will probably take years of patient research to learn what we ought to be able to learn from fever urines alone. As yet no one has gone beyond the comparatively simple scheme of analysis which I proposed some years ago, and that scheme is not adequate for fever urines. The neutral sulphur and undetermined nitrogen so abundant in these urines should receive far more attention than they have yet received. I suspect that in these fractions are hidden products which do not belong together.

The extensive elimination of kreatin in fevers is another problem the solution of which may be of far-reaching importance, both from a medical and from a biochemical standpoint. From a biologic standpoint I believe that kreatin and kreatinin are fundamentally different products, and I am inclined to regard the appearance of considerable quantities of kreatin in the urine as a distinctly pathologic phenomenon. Whether this assumption will in the end turn out to be true or false is immaterial. Important is only the fact that in kreatin we have one of the most interesting and best-known substances with which the biologic chemist has to deal, yet we do not now know whether it is primarily a waste product or a food. Yesterday it was a normal waste product, to-day we have no reason for saying so, to-morrow we shall certainly know.

It is conceivable that the investigation of this question may at last furnish what the nitrogen-equilibrium work has failed to give, a theoretic foundation for a practical doctrine of normal protein consumption. If kreatin should turn out to be a food we have at once an explanation of the dietetic value of meat extracts, as well as a reason why meat might be regarded as having an especial and peculiar value as a protein food. In the kreatin elimination we should then also have an index to the maximum amount of meat products which can be advantageously consumed. We might then reasonably assume that meats are exceedingly important food products, but that the maximum consumption of meat normally should fall short of yielding kreatin in the urine. The more other protein material is consumed, the less meat it would take to reach this maximum value. In diseases like fevers, which yield large quantities of kreatin in the urine, all meat products should then be excluded.

It is scarcely necessary to add that I advance this point of view only as a tentative working hypothesis and only because I think it will demand the kind of metabolism work which is now urgently needed.

For the next few years the conception of a dual protein katabolism should be and, I think, will be threshed out on the basis of work on fever patients and on normal persons, with the help of an occasional investigation on such suggestive conditions as pregnancy, convalescence, progressive paralysis, gigantism and dwarfism. This will clear the ground and incidentally should sharpen our wits and our tools for work on the more difficult chronic diseases, such as rheumatism and gout, and the chemically more complicated diseases, such as nephritis, atrophy of the liver and diabetes.

The specific problems in diabetes loom up so large and important as to be in themselves worth the lifetime of any chemist having exceptional opportunity to work on them. No generally acceptable explanation for the inability of the diabetic organism to utilize sugars has as yet been advanced, and so long as this is the case such a concrete and well defined problem demands renewed critical or constructive work. The same holds true for the acid intoxication theory advanced on the basis of so-called diabetic coma. So long as this definite and withal plausible theory can not command general acceptance, it should be regarded only as a standing challenge for more work by anyone to whom any special opportunity for work on it may happen to come.

Some of the more superficial observations and conclusions included in the accepted teachings concerning diabetes seem to me to be decidedly open to suspicion. The supposedly characteristic fruity odor emanating from the breath of diabetic persons has, I believe, nothing to do with the traces of acetone which the respired air of these patients contains. I have very nearly satisfied myself that that odor, in most cases at least, is due to nothing else than delicate whiffs of the stomach contents.

The peculiar sweetish odor occasionally encountered in diabetic urines which is also believed to be due to acetone is entirely different from the so-called acetone breath. As yet, I have not the slightest idea what this odor is due to, but in this case I am positive that acetone has nothing whatever to do with it.

The qualitative chemical tests for acetone in urine as usually carried out may likewise be regarded as pure fiction, for I have never yet seen a fresh diabetic urine the acetone concentration of which was sufficient to give a positive test with the nitro-prussid reaction.

I would not imply that such errors in the teachings on diabetes tend to invalidate the more important teachings based on the sugar, the ammonia, and on diacetic and oxybutyric acid. The purpose of this paper is, however, to point out fields for biochemical research in hospitals, and I regard the whole subject of diabetes, and especially the acid intoxication theory, as a most fruitful field for purely chemical work. I have already on a previous occasion[1] indicated what that theory would seem to call for from the therapeutic standpoint, and I repeat now that the sodic carbonate treatment as practiced must be regarded as a crude and unsuitable application and test of that theory.

It would be going outside the scope of this address to enter on detailed discussions of the numerous relatively isolated problems to be found in the field of metabolism. Small specific problems usually yield the quickest returns and not infrequently good ones. Every chemist knows this and is only too glad to take up the chance observations or suggestions which constitute the starting point for such investigations. Experienced clinicians usually have problems of such a nature to offer. I have endeavored rather to advance a point of view and to indicate broadly the kind of work which it calls for and the kind of material which must be worked up from that point of view.

The goal of the future in the field of metabolism is detailed knowledge of what takes place in the different organs. There are seemingly unlimited possibilities for several generations of work on the specific metabolism of specific organs and its effects on the general metabolism. The final explanations of and remedies for diseases, if they are to be attained at all, will be reached on the basis of such refined metabolism investigations. For the present we need, however, first of all, to learn the more obvious and general laws that govern the animal metabolism. From the standpoint of medicine we must surely fiurst so learn to know the waste products that we shall be able to say with greater certainty than has yet been possible whether a urine is or is not abnormal. This, I believe, can be done on the basis of the tissue metabolism just so soon as the necessary standards for comparison have been worked out.

We need, however, an abundance of reliable statistical material. The normal tissue metabolism from infancy to old age must be standardized carefully by the help of suitable and easily duplicated test diets. I think we shall then find not only that severely sick hospital patients show a deficient or abnormal tissue metabolism, but also that those who are merely weak and debilitated, and who need "building up" will reveal that fact to the chemical test. By those same chemical tests we shall then also know whether a given treatment has produced a general and fundamental improvement or whether it has merely removed some of the symptoms. So far as I now can see, there is no reason why we should not be able to determine with all desired certainty to what extent it is possible to influence the tissue metabolism by drugs, by diets and by different modes of living. The very stability of the tissue metabolism (as indicated by the constancy of the kreatinin elimination) against nearly all fleeting changes of diets and conditions would seem to me to constitute the surest guarantee that this line of work will, at all events, not yield a series of illusions. If well done, it should add a new chapter to the science of metabolism and of medicine.

1. THE JOURNAL A. M. A., 1907, xlix, 128.

Original Articles

THE SCIENTIFIC AND PRACTICAL VALUE OF HOSPITAL INTERNESHIP.*

BY THE LATE
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CHICAGO.

Of the three learned professions, medicine, law and theology, medicine is pre-eminently the one which requires the most careful preparation for practice, because the physician the moment he enters on his lifework has to deal with human life, the most sacred thing on earth. The shortcomings and mistakes of the inexperienced lawyer and preacher do not weigh as heavily in the balance of human woes as the errors of judgment of the young practitioner who enters his profession without adequate, thorough, careful preparation. The former can very often be rectified by subsequent efforts in the right direction, the latter are only too often beyond the reach of human aid.

In law and theology a profound book knowledge goes far in preparing the way to successful practice; the physician must not only be in possession of this, but he must be taught how to apply his knowledge under the most varying conditions presented by disease and injuries if he is to become a safe practitioner from the very beginning of his professional career. In medicine theory must become subordinate to practice if students are to be made safe and successful practitioners.

Before universities were founded, hospitals built and

* The last paper prepared by Dr. Senn; read for him at the annual meeting of the Cook County Hospital Alumni Association, February 2, 1908.

text-books written, the old masters of our profession gathered a few pupils around them, inculcated the knowledge they possessed into them by informal conversational discourses, and taught them clinical medicine with the material which came in their professional services. At that time clinical instruction overshadowed theoretical teaching. During the early period of the university age the reverse was the case. It is said that Hueter lectured for eighteen years on surgery in the University of Göttingen, without performing a single operation. With the awakening of scientific medicine during the last century and the building of modern hospitals, clinical teaching and laboratory work have largely taken the place of didactic lectures.

THE INTERNE IS THE STUDENT.

The hospital interne has the advantage over his colleagues from the very beginning. The competitive examination which secures for him his position is best calculated to stimulate him during his student days to extraordinary diligence and perseverance to gain the coveted appointment. Internes appointed by competitive examination always represent the studious, ambitious element of the class. They are usually men of high and noble aspirations, intent on making records for themselves during their professional careers; men with pronounced taste for the scientific side of medicine, men intent on enriching and ennobling the profession of their choice, men who have decided to become physicians for the good they can do rather than for the money they expect to earn.

This ambition to become a hospital interne usually takes root early in the mind of the student and exercises an influence for good throughout his college career. He starts out with a notable object in view, and governs himself accordingly. Having received the coveted prize by much self-denial and close application to his studies, he has already reaped one great satisfaction in life.

COLLEGE INSTRUCTION ALONE IS INSUFFICIENT.

There is no medical school in this or any other country which can give its students the amount of clinical instruction and training necessary to prepare them adequately for their profession. It is the hospital interne who graduates at the head of his class, and wins the prize in a trying competitive examination, who makes up this defect of his medical education. It will not be long after he has entered the hospital before he will realize more keenly than any time before that learning obtained by observation and experience far exceeds that gotten by precept.

The young doctor never feels more competent to battle with disease and treat emergencies than on the day of his graduation, but if he is the right sort of a man the first few cases coming under his own individual care will satisfy him of how little he knows and how true it is that "experience is the best teacher, only the school-fees are heavy."

This trying time the hospital interne spends under the guidance and instruction of the members of the attending staff, usually men of wide experience and high standing in the profession. The value of such a postgraduate clinical course from a scientific and practical standpoint can not be overestimated, as it always opens the way to a successful professional career, provided the opportunities offered are utilized to best advantage during and after the interneship. In these days of excellent text-books it is the hospital and the laboratory rather than the lecture-room which furnish the best means of obtaining a scientific as well as practical medical education. The postgraduate course of the hospital interne consists almost exclusively of these two modern methods of teaching medicine. It is during this part of his training that the interne awakens to the fact that "theories are very thin and unsubstantial; experience only is tangible." Before he leaves the institution he has learned the meaning of the maxim that "one thorn of experience is worth a whole wilderness of warning."

Every modern hospital has a well-equipped laboratory. It is here that the young physician spends much of his time in verifying or correcting the clinical diagnosis of the cases under his immediate observation. The microscope, test tube, culture medium, Roentgen-ray, electric test, and other modern diagnostic resources, are pressed into service to unravel the mystery and determine its anatomic location, and in many instances its exact pathology *in vivo*.

The American medical student does not see enough postmortem examinations, and such opportunities are but seldom offered in private practice. The morgue is a wonderful place in which to study the infinite changes wrought by disease, and to locate the broken link which severed the chain of life. It is in the silent deadhouse that the interne often clears up what was a mystery during life. It is in the deadhouse that he finishes the clinical history of his fatal cases and seeks for and analyzes the causes of death, and how they were created by disease. It is the truths evolved and the stern facts learned in the laboratory that so often awaken and sharpen in the interne his desire for original research work and lay the foundation for a useful literary career.

Thousands of the most prominent lights in our profession owe their success in life to their experience as hospital internes. It is very natural that this should be so. In the first place, only graduates of more than average ability and aptitude receive such appointments. In the second place, they live in an exclusively medical atmosphere during their service of eighteen months or longer, constantly in touch with the members of the attending staff who, by precept and example, unconsciously feed the flickering light of emulation. A review of modern medical literature will show that some of the very best contributions were made by physicians during their interneship days, and, therefore, shadowed their subsequnet scientific and literary careers.

RESPONSIBILITIES DEVELOP CHARACTER.

Amphitheater clinical instruction of students is something entirely different from the clinical training of an interne. For the most part the student is a passive hearer and onlooker, while the interne shares, at least in part, the responsibilities of the attending physician and surgeon in the diagnosis and treatment of the cases in their service. On him devolves the important duty of writing a concise, clear clinical history of every case, which serves as a basis for a systematic examination, and eventually a correct diagnosis. This part of his training is well calculated to make him a careful observer and to engender a taste for literary work. Daily he receives the benefits of the ripe experience and good judgment of the members of the attending staff, especially of the one under whom he has the privilege to serve. He is given an opportunity to examine every case, make his own diagnosis, and under the supervision of his attendant conduct the treatment.

In surgical operations he assists and in doing so coop-

erates with the operator, following with an interest begotten by a sense of responsibility every detail of the procedure. The after-treatment rests largely in his hands. It is the interne who must be on the lookout for complications, and to remedy them in time or notify his chief. Manual dexterity, so essential to the surgeon, can be acquired only by careful observation and long practice. The opportunities for developing the faculty of observation are unlimited during the service of an interne, and it is this essential qualification of the physician that he tries to cultivate. The daily opportunities for educating the special senses by observation and examination of patients results in the acquisition of a diagnostic acumen which can be attained only by an extensive and long clinical experience. The keen eye, the discerning ear, the *tactus eruditus,* the manual dexterity in operating and dressing of wounds, the proper application of splints and other mechanical appliances are the precious fruits and rich rewards of interneship.

As the interne penetrates deeper and deeper into the real work of his profession he becomes imbued more and more with the all-important fact that in his, as in any other profession, "practice is the best master," and he soon awakens to a consciousness that with all the splendid opportunities which surround him he is becoming deeply indebted to his profession. He is soon made to see the shortcomings of pure science in the practice of medicine and the great importance of practical training. He is not slow in detecting where our science and art are defective, and soon appreciates that "it is better to create than to be learned."

THE VALUE OF ASSOCIATIONS.

One of the most valuable practical advantages of an interneship is the association of his colleagues. A noble spirit of rivalry reigns in the little circle, a healthy stimulus for hard honest work. Books and medical journals are read and their contents discussed. Cases and operations are made the subject of conversation at table and during hours of leisure, and this way each interne receives, to a certain extent, the benefits of the entire service, and such intercourse is the best possible preparation for their future work in medical societies. It is conducive to the development of the gift of debate and a wholesome spirit of criticism. Internes are attracted by medical societies, and often enrich the meetings by the presentation of cases and pathologic specimens, thus filling in many gaps in the program with valuable material. In this way the interne becomes at the very threshold a contributor to medical literature and learns the value of postgraduate education through the medium of medical societies.

The many acquaintances he makes among physicians and the public during his service are most helpful to him when the time comes for him to decide on the location of his future field of practice. This is a very important step in the life of every young physician. Many men of more than average ability have been unsuccessful, not because they were not well prepared and did not make hard efforts, but because they made mistakes in the choice of their locations. The interne owing to his superior qualifications in the practical work, is sought by communities, corporations, hospitals, medical colleges, the Army, Navy and Marine-Hospital Service, and very often steps from the hospital at once into a lucrative practice. In other instances his wide acquaintance with physicians not only in the city in which he has served, but all over the country, is most helpful to him in his selection of a congenial location, with the necessary opportunities of establishing a growing practice, as opportunities make men as well as men opportunities.

The greatest value of an interneship consists, however, in the practical training received. A year and a half in a large, well-equipped hospital, and under the tuition and supervision of a competent staff, is more than equivalent to ten years of active practice. Knowledge begets confidence, while the doubting, faltering, hesitating physician is always a failure. On the other hand, confidence, decision and courage based on knowledge and experience command respect and confidence. It is the confidence in his ability as a diagnostician and his knowledge of and faith in appropriate treatment which makes our internes successful physicians, and their competency in the science and art of surgery safe and successful operators.

At the end of his term of service the interne is fully impressed with the fact that "the road to learning by precept is long, by example short and effectual," and he leaves the institution with a sense of confidence based on the scientific and practical knowledge he has acquired since the day of his graduation.

It is the interne who, during his postgraduate pupilage, has adhered most rigidly to the rules laid lown by Platen and has made the best use of his time and opportunities, that will leave the hospital best prepared to battle with disease and to assume the responsibilities imposed on the surgeon.

"Bemerke, höre, schweige, urteile wenig, frage viel."

TUBERCULIN IN PULMONARY TUBERCULOSIS.

WITH PARTICULAR REFERENCE TO THE ADMINISTRATION AND DOSAGE OF DENYS' TUBERCULIN.*

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It is now generally accepted that in tuberculin we possess a most valuable remedy in the treatment of tuberculosis. Koch's tuberculin, introduced in 1890, as a cure for tuberculosis, proved not to be such. Tuberculin was then given in large doses. Violent, dangerous, in some cases fatal reactions were produced; the curative effects were not seen. Error in the conception of the action desired of tuberculin led to misconception as to the proper mode of administration. Reactions were sought; cases were not properly selected; all were subjected to the new remedy. As a result, tuberculin came to be almost universally condemned.

This revulsion of feeling lasted for some years, but about 1898 interest in tuberculin was revived. Infinitesimal doses were given, and an attempt was made to render reactions of minimal occurrence instead of considering them the great desideratum.

In my opinion one of the dangers of tuberculin therapy lies in the fact that patients and physicians place too much trust in tuberculin and slight other elements of treatment. It is natural that the patient should do this, but the physician should insist that the hygienic treatment be carried out faithfully and conscientiously.

The use of tuberculin is based on the principles of artificial immunization. Any poison in the body has the power of stimulating the system to the production of antibodies. It is with the idea of obtaining an over-

* Read before the Tri-State Medical Society of Virginia and the Carolinas, Charlotte, N. C., Feb. 18, 1908.

production of antibodies and a consequent insusceptibility to the disease that use is made of tuberculin. The organism can be immunized by injecting more poison into it, thus forcing it to the increased production of antibodies (active immunization), or we can obtain the antibodies by injecting the blood serum of a previously immunized animal into the infected individual (passive immunization). In the case of an acute disease, running a rapid course, passive immunization should be employed in order to obtain the highest degree of immunity in the shortest time possible. If the disease is characterized by chronicity, active immunization should be employed in order to obtain the more lasting resistance to the poison. Consequently, in tuberculosis active immunization should be produced.

To establish an active immunity it is absolutely necessary that the toxins work with regularly progressive intensity on those groups of cells which manufacture antitoxin. Slight or stationary stimulations are not productive of immunity. It appears from the researches of Roux and von Behring that many small increasing stimulations are of more value than one large stimulation, the aggregate amount of stimulation being the same in both cases, and Trudeau states that "infinitesimal doses, methodically increased, which produce only slight stimulation of the defensive resources of the organism, result in a well-marked toxin immunity, as shown by increased toleration to large doses of toxin, while larger doses or too rapid an increase may bring about hypersusceptibility and an aggravation of all the symptoms of the disease."

VARIETIES OF TUBERCULIN.

Koch's original tuberculin consists of 5 per cent. glycerin bouillon no which human tubercle bacilli has been grown, evaporated by heat to one-tenth of its volume and filtered through a porcelain filter. Deny's tuberculin or bouillon filtrate consists of the bouillon or broth on which human tubercle bacilli of known virulence have been grown, filtered through porcelain and not exposed to heat. It contains, in addition to the toxins manufactured by the living tubercle bacilli, only those soluble proteins which come from the dead tubercle bacilli into the culture fluid. Denys' tuberculin possesses the advantage over Koch's original tuberculin in not having been exposed to heat, so that the chance of the toxins and proteins being affected by thermal influences is eliminated.

Koch's other products, tuberculin new and tuberculin new bacillen emulsion, contain the pulverized bodies of crushed virulent tubercle bacilli, much weakened in virulence by repeated dryings and not capable of reproducing tuberculosis.

From what is known of artificial immunity it would appear that Koch's original tuberculin and Denys' tuberculin would confer the greatest amount of antitoxic immunity; bacillen emulsion would excel in the production of an antibacterial immunity.

DESIRABILITY OF ESTABLISHING ANTITOXIC IMMUNITY.

Tuberculosis is both a bacillary and a toxic disease. The presence of living tubercle bacilli, irrespective of their toxins, does harm to the patient, but also, and we believe to a far greater extent, are the tuberculo-toxins baneful in their influence. While the bacilli are mainly responsible for the local conditions in the lungs, the toxins are the cause of the emaciation, the loss of strength, the febrile temperature, the rapid heart action, the night sweats; in short, the constitutional manifestations. The origin of this toxemia of tuberculosis can be accounted for only by the assumption that the toxins and soluble proteins manufactured at the site of bacillary invasion are taken into the blood and lymph streams and carried to all parts of the body. By establishing an antitoxic immunity we neutralize the toxin circulating in the blood.

Any direct attack on the bacilli is out of the question. Tuberculin, however, in any form, sets up a hyperemia in the tuberculous and peri-tuberculous tissues, and also excites a localized leucocytosis. Hyperemia is one of the best means at our command with which to combat infection, and leucocytes are considered the principal porters of both elements, amboceptor and complement, of those substances in the blood whose function it is to bring micro-organisms into solution, the bacteriolysins. With the advent of leucocytosis, it may be assumed that phagocytosis sets in, another of Nature's methods of defense against infection. Furthermore, it has always seemed to me that the marked primary increase and subsequent diminution in cough and sputum in many patients being treated with Koch's original tuberculin, or with Denys' tuberculin, was an excellent proof that a local as well as a general beneficial effect was being exercised. Consequently, we see that by establishing an antitoxic immunity we neutralize the tuberculo-toxins, and we also wage war on the bacilli themselves.

Denys' tuberculin appears to be best suited for the production of an antitoxic immunity. Containing, as it does, the soluble toxins and proteins of the tubercle bacillus, not subjected to heat, it would seem to be the most logical tuberculin to use. Furthermore, toxins dissolved in the culture fluid are known to lose their virulence, they become attenuated and are known as toxoids, that is, toxins having lost their virulence but still retaining their combining power with antitoxin. While losing their virulence, however, they do not lose their immunizing power. By injection of toxins thus modified we obtain a considerable increase in the anchorage of specific toxin, but at the same time (while we do not essentially increase the poison production) we obtain a marked increase in the production of antibodies. This occurrence, regularly repeated, must, by the combination of toxin and antitoxin, eventually bring about freedom to the body from the harmful agent.

INDICATIONS.

Tuberculin may be employed in:

1. All incipient cases, cases of closed tuberculosis in which ulceration has not taken place and bacilli are not to be demonstrated in the sputum.

2. Uncomplicated non-febrile, first and second-stage cases.

3. Fibroid cases not running a febrile temperature.

4. Febrile cases in which the temperature does not drop under treatment by rest, and where fever is due to the tuberculo-toxin alone and not to mixed infection. In such cases tuberculin should be administered with the greatest caution, in the most infinitesimal doses, with long intervals between successive doses.

5. Advanced, third stage cases. Tuberculin can here occasionally be used, not as a curative agent, but to aid in relieving distressing symptoms. It will often relieve the tight, harassing cough that is so exhausting, render expectoration easier, do away with thoracic pain, and help to make the patient more comfortable. In such cases its administration should be most guarded and the dosage very minute.

CONTRAINDICATIONS.

1. Greatly emaciated or greatly weakened individuals. The general body strength must first be raised by rest and proper diet before such patients will be able to supply those defensive forces which tuberculin stimulates to action.

2. Third stage cases with mixed infection. Those cases constitute the most absolute contraindications to the use of tuberculosis. In them a hypersusceptibility is easily excited, violent reactions are prone to occur, a general aggravation of the symptoms may set in, and great harm result.

3. Hemorrhage: Hemoptysis occurring during the administration of tuberculin is a signal not for the permanent withdrawal of the drug, but for its cessation at once and until some time after subsidence of all hemorrhagic symptoms.

4. Heart disease: A contraindication only if it is feared that owing to possibility of reactions compensation may be lost.

5. Marked increase in pulse frequency, beginning and persisting during administration of tuberculin.

6. Marked loss of weight, beginning and persisting during the administration of tuberculin.

7. Complications: Diabetes, nephritis, hepatic cirrhosis, hysteria, neurasthenia, epilepsy.

The patient about to take tuberculin should be impressed with the necessity of conscientiously carrying out the physician's orders. Before treatment is begun the physician should acquaint himself with the course of the patient's temperature, a two-hour record being most satisfactory, the temperature being taken preferably on the odd hours to avoid the 2 p. m. temperature coming immediately after a hearty meal, which may, in some individuals, be responsible for a temporary rise of as much as four-fifths of a degree. This preliminary record should be kept at least three days, from four days to a week is better. At the conclusion of the preliminary observation injections can be begun if advisable. They are given preferably in the morning, between 9 and 12 o'clock; injections given in the evening are open to the objection that very mild reactions may set in and pass off during the night, and are thus overlooked. The injection being given in the morning, the patient should be instructed to take very little exercise for the rest of the day (if any be allowed). By very little exercise I mean one-third of a mile, at a slow walk, as a maximum, and, in general, patients taking tuberculin should be allowed less exercise than others. The temperature should be taken every two hours for the rest of the day, the thermometer being left in the mouth five minutes if the weather is warm, ten if cold. In very cold weather it is best for the patient to go into a warm room and remain there ten minutes before taking his temperature.

Two hour temperature records on the day of injection are the best. Occasionally a three hour record may be kept; a four hour record is useless, for mild reactions may come and go in the four hour interval. Except on the day of injection, a three hour record will suffice. A temperature of 100 F. is the minimum reactionary temperature, unless there is headache and general malaise, with a temperature of, let us say, 99.8 degrees, when a reaction can be assumed.

REACTIONS.

We may define a reaction as that clinically demonstrable symptom-complex exhibited by a patient as a result of too large a dose of tuberculin. Reactions are of all grades; many are so mild as to be overlooked; some have been so severe as to result fatally. Reactions may be divided into three classes: (a) Cutaneous, (b) local or focal, (c) general or systemic.

Too little stress has been laid on the cutaneous and local reactions, the physician generally contenting himself to wait for the onset of a systemic reaction before allowing his dosage to be modified. Reactions are the most important objective phenomena in connection with tuberculin administration, for they serve as the one infallible guide for the regulation of dosage.

CUTANEOUS REACTION.

The cutaneous reaction is seen but seldom. It consists in the appearance at and about the site of injection of a red, tense, slightly edematous, tender, painful swelling, in size usually not over the diameter of a silver dollar. There is no sense of fluctuation. The swelling makes its appearance in from three to ten hours after the injection, lasts a variable time—two days to a week—disappearing gradually. It may be confounded with a hypodermic abscess, but shows no tendency to suppurate, and disappears far sooner than does the other. It has been my good fortune to witness three such reactions, two in the same patient. In each case the mouth temperature failed to reach 99 F. and there were no subjective signs of systemic disturbance.

LOCAL OR FOCAL REACTION.

The local or focal reaction is of far more frequent occurrence and can very often be demonstrated at the height of a systemic reaction, when, of course, its presence from the practical standpoint of dosage loses weight. It consists in an increase in the physical signs in the lungs and occasionally in the appearance of physical signs where formerly none existed. Cough and expectoration become more abundant. These changes are due (1) to hyperemia about the focal process, caused by the administration of tuberculin; (2) to increased bronchial secretion; (3) to increased local leucocytosis.

As I have said, this form of reaction is very frequently found in common with the systemic reaction, but twice within the past two months I have observed its presence in two patients, in one of whom the temperature did not reach 98.6 F., in the other the maximum being 99.4 F.; in neither case was there any subjective discomfort. In one patient, with slight infiltration of the right apex anteriorly and posteriorly, producing tubular expiration and a few subcrepitant râles, slight dulness above the clavicle anteriorly, and in the supraspinous fossa posteriorly, was demonstrable, and the râles were far more moist than they had been at the time of previous examination, ten days before. In the other patient, with very slight involvement of the right apex posteriorly, many moist râles and slight bronchovesicular breathing were noted, previous physical signs having consisted in a few subcrepitant râles. In both cases increased cough and expectoration were noticed within twelve hours after injection of tuberculin, and it was this fact that caused me to examine the chest again, the examination in each case being made within twenty-four hours of the time of injection. The cough and expectoration lessened within a week, and the physical signs were perceptibly receding at the end of that time. Focal reactions, when moderate, are not undesirable; they rid the system of pus and septic material, and we have no better expectorant than tuberculin.

SYSTEMIC REACTION.

The systemic reaction is well known and classical. In from six to thirty hours (the latter being rare) after injection of tuberculin, the temperature rises to anywhere between 100 F. and 106 F. The patient may not complain of any subjective symptoms, but usually there is discomfort, chilliness amounting at times to a definite rigor, headache, nausea, at times vomiting, pains in limbs and body, general malaise, and increase at times in cough and sputum if a focal reaction co-exist. These symptoms are usually proportionate in severity to the height of the temperature. The temperature drops in from two to ten hours (depending on the severity of the reaction) and save for a feeling of weakness, all symptoms except cough and sputum have subsided and the patient is himself again in twenty-four hours in the majority of cases. Sometimes, however, a systemic reaction appears late, thirty hours after injection, and fever persists for two or three days, gradually dropping to normal.

The desirability of reactions has long been a mooted point, but now they are considered to be distinctly undesirable. At the time of his discovery of tuberculin Koch believed that the organism should be subjected to many powerful reactions in order to produce focal necrosis and the elimination of both tubercle tissue and tubercle bacilli. This idea is not practicable and does not now hold good theoretically. It has been abandoned entirely, but many still cling to the idea that occasional reactions are beneficial; morally they may be, but physically they are not. A moderate hyperemia, with serous exudation in the peri-tuberculous tissue, unquestionably has a good curative influence, but this can occur without a systemic reaction appearing, and it is the universal verdict that marked constitutional symptoms are bad.

OBJECT OF TUBERCULIN.

Tuberculin has as its object not so much the effect on tubercle tissue and bacilli as the protection of healthy tissue against the bacilli and tuberculo-toxins. To attain this end, reactions are unnecessary. Were reactions necessary, then the greater the reaction the greater the immunity, but, as a matter of fact, we not only see that we can acquire immunity without reactions, but also that we can get many and repeated reactions without immunity. Moreover, reactions favor the production of hypersusceptibility. To quote Trudeau:[1] "By hypersusceptibility we do not mean the usual susceptibility to an increased dose which shows itself by an ordinary reaction, but an exaggerated and growing sensitiveness to the toxin which follows a reaction without any previous warning. For instance, a patient having reacted in the usual way to 1 mg., and all the symptoms of the reaction having disappeared and the temperature become normal for two days, an injection of 0.5 mg. is followed by a marked, even a more marked disturbance than the one produced by a 1 mg. dose; another interval of rest being given, and the dose reduced to 0.1 mg., another strong fever reaction manifests itself, and this continued and sometimes increasing susceptibility of the organism to a decreasing dose of toxin constitutes tuberculin hypersusceptibility."

If this condition occurs it is not necessary to discontinue tuberculin permanently. All injections should be stopped until the temperature has been normal for ten days, then a dose of 1/100 of that causing the beginning hypersusceptibility should be given, and the subsequent increase in dosage should be more rapid than before; in fact, more caution is needed. Of course, if marked hypersusceptibility recurs two or three times the case is not a suitable one and tuberculin will have to be abandoned.

ADMINISTRATION OF DENYS' TUBERCULIN.

Diluting the Tuberculin.—As a diluting fluid physiologic salt solution is used, to which 0.5 per cent. carbolic acid has been added to prevent decomposition. A pipette of small caliber, containing 1 c.c. and accurately graduated to tenths of a cubic centimeter, is used. This is sterilized and filled with 1 c.c. of pure bouillon filtrate,[2] which is then emptied into a sterile bottle. Then, using the same pipette or one exactly similar, 9 c.c. of the diluting fluid are added. This makes a 10 per cent. solution, each cubic centimeter of which contains 100 mg. of tuberculin. Proceeding in like manner, we make from this 10 per cent. solution a 1 per cent. solution, each cubic centimeter of which contains 10 mg. of tuberculin, and in similar fashion we proceed to the weaker solutions.

The solutions should be kept in a cool place, in the dark or in brown bottles, and the weaker ones (0.1 per cent. and under) should be renewed after four weeks. All turbid solutions are worthless and should be discarded.

Eight solutions are used, each one-tenth the strength of the next higher. No. 1 contains 1/10,000 mg. per c.c. and is for febrile cases only; No. 2 contains 1/1,000 mg. per c.c.; No. 3 contains 1/100 mg. per c.c.; No. 4 contains 1/10 mg. per c.c.; No. 5 contains 1 mg. per c.c.; No. 6 contains 10 mg. per c.c.; No. 7 contains 100 mg. per c.c.; No. 8 is pure tuberculin.

A syringe is used holding exactly 1 c.c. and carefully graduated to tenths of a cubic centimeter. Injections (if no reactions occur) are given twice a week. With a febrile patient solution No. 1 is used, and intervals between injections should be four or five days. With a non-febrile patient solution No. 2 is employed, containing 1/1,000 mg. per c.c. and an initial dose of 1/10,000 mg. is given. In other words, as the syringe contains 1 c.c., we give one-tenth of a syringeful of solution No. 2. Increase is made at first by 1/10,000 mg., consequently at the subsequent dose we give two-tenths of a syringeful, then three-tenths, then four-tenths, and so on, till we have given 9/10,000 mg. or nine-tenths of a syringeful.

We then change to solution No. 3, ten times stronger than No. 2, containing 1/100 mg. per c.c. Beginning with 1/1,000 mg., or one-tenth of a syringeful, increase is made by one-tenth of a syringeful, but we must remember that while with solution No. 2 we were increasing our dosage by 1/10,000, we are now increasing by 1/1,000 mg. When we have reached 9/1,000, or nine-tenths of a syringeful of solution No. 3, we use solution No. 4, containing 1/10 mg. per c.c., and proceed as before, bearing in mind that now we are increasing each dose by 1/100 mg. When solution No. 6 is reached the interval between doses should be lengthened to five days, increase still being made by one-tenth of a syringeful of the solution used. When the patient is receiving 100 mg. six days should elapse between doses, when 400 mg. are reached, from ten days to two weeks. The maximal dose is 1,000 mg., or 1 c.c.

1. Tuberculin Immunization in the treatment of pulmonary tuberculosis. Am. Jour. Med. Sc., June, 1907.

2. Denys, J.: Le Bouillon Filtré du Bacille de la Tuberculose dans le traitement de la Tuberculose humaine.

of pure tuberculin. This dose may, if reached, be repeated a few times, but, as a rule, tuberculin should then be dispensed with for a time. If no reactions occur the course will consume about a year. Reactions will, of course, greatly lengthen the time; in the majority of cases the maximal dose is never attained.

This is the method of dosage employed by Denys.. Naturally the dosage must be suited to each individual case, and in giving such an outline we are, of necessity, forced to generalize. Each physician will learn by experience what tuberculin will do in his own hands and will modify his dosage accordingly. Some patients will withstand rapidly increasing doses, others will have to be dealt with most cautiously.

It is found that patients react most frequently at the second or third dose of a new solution. This is not strange, for with each new solution employed the increase in dosage becomes ten times that of the preceding solution. Consequently, when proceeding to a new solution, it may be well to increase by 5 centigrams instead of by 1 decigram of the solution, for two or three doses, to avoid possible reaction.

With the occurrence of a systemic reaction no further dose should be given until the temperature has returned to normal and has remained so for two days. If cutaneous or focal reactions occur it is well to repeat the offending dose once before proceeding to an increase. After a systemic reaction the offending dose should not be repeated, but a smaller one substituted. Thus if a patient reacts to 1 mg. the subsequent dose should be 1/5 mg., then 0.5 mg., then 1 mg., the interval between doses remaining the same as before the reaction.

If a second reaction occurs before the dose causing the first reaction is reached or surpassed, tuberculin should be stopped until the temperature has been normal for four days, then a still smaller dose should be given. Thus, if 1 mg. causes a second reaction, the next succeeding dose should be 0.1 mg. and progression upward should be made by 0.1 mg. to a dose. If reaction again occurs before the primarily offending dose is reached, tuberculin hypersusceptibility is probably setting in and should be dealt with as stated above.

Schnöller,[3] of Davos, advocates the administration of Denys' tuberculin in a slightly different manner. He employs two methods, the conservative and the radical. His conservative method is indicated in: (1) all extensive lesions, (2) patients with slight resisting power, (3) patients with much emaciation, (4) patients with mouth temperature over 99.4 F., (5) patients with inverse temperature, (6) patients with hemoptysis, (7) children, (8) pregnancy.

He advises in these cases the administration of solution No. 2 daily, of Nos. 3 and 4 every other day, of Nos. 5 and 6 twice a week; thus, even in his conservative method, his contention is for more rapid dosage with weaker solutions than are suggested by Denys. I have made a practice of giving solutions Nos. 2 and 3 every other day, if no reactions appear, beginning biweekly injections with No. 4, and have not seen any bad results from this procedure.

Schnöller uses the radical method with patients in good physical condition and manifesting strong tolerance in order to establish an active immunity as rapidly as possible. His radical method consists simply in starting with solution No. 4 and following out practically the same schedule of dosage as that outlined by Denys. I have had no experience with this method.

The time necessary for a course of tuberculin can not be estimated in advance, but in every case the patient should be told that it must be administered for several months to be of benefit. We again quote Denys: "The two most important factors in obtaining results are the length of time over which the treatment is extended and the dose of toxin the patient can be made to tolerate. . . . Not much permanent good can be expected from a short treatment extending over a few months, especially if the highest dose reached at the end of that time be a fraction of a milligram. On the other hand, when full doses have been reached they should not be continued indefinitely for fear of exhausting the patient's power to respond, by the formation of antibodies, to the stimulus of the injection of toxin."

RESULTS.

Patients tolerating increasing doses are not so prone to the exacerbations and relapses exhibited by those not so treated. More permanent cures have resulted when tuberculin has been used than where it has been omitted; many patients running a slow but steadily downhill course, in spite of open-air treatment, improve and get well under tuberculin. Tuberculin has a favorable effect on the chronic toxemia of tuberculosis, which disappears under its use to an astonishing degree. Cough and sputum frequently cease, or persist greatly lessened in amount.[4]

CONCLUSIONS.

1. Tuberculin is the most valuable adjuvant to fresh air, rest, good food, we possess in the treatment of pulmonary tuberculosis.

2. Denys' tuberculin appears to be best suited to establish an active antitoxic immunity, the type of immunity capable of doing the greatest good.

3. Tuberculin is indicated in many types of cases, and in the hands of a competent administrator will do no harm.

4. Reactions are often overlooked; they are not to be desired, and when frequent or violent are distinctly harmful to the patient.

5. The dosage should at first be infinitesimal; increase should be very gradual; the word "haste" has no place in tuberculin therapy.

6. Time and tolerance bring success in the treatment by means of tuberculin.

7. Tuberculin should never be used save in conjunction with strict hygienic and dietetic measures.

33 Haywood Street.

3. Theoretisches und Praktisches Uber Immunisierung gegen Tuberkulose nebst Statistik von 211 mit Denys' schem tuberculin behandelten Lungenkranken

4. See also: Brown, L.: The Treatment of Tuberculosis. Osler's Mod. Medicine, vol. iii; Bandelier and Roepke; Lehrbuch der Spezifischen Diagnostik und Therapie der Tuberkulose.

Business Methods.—Physicians have the reputation for being very poor business men. It seems almost axiomatic that the physician who succeeds away beyond the rank and file must have in addition to other attainments a keen business mind. The little motto so often seen in the offices of large business firms "Do it now" should be religiously observed by the physician in prompt response to calls, prompt case records, charges, statements and collections. There is no business man who should avoid neglect so strictly as the physician. Someone has said jocosely—it is a transient business; certainly there are many transients. Nothing suceeds like success and the $50,000 a year man has the confidence of the thousands who have only heard of his success.—*Leucocyte.*

THE RELATIONSHIP BETWEEN THE SPINAL CORD, THE SYMPATHETIC SYSTEM, AND THERAPEUTIC MEASURES.*

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PHILADELPHIA.

In 1834 there was published a book by William and Daniel Griffin, brothers—one a physician of Edinburgh, the other a surgeon of London—in which they say: "We should like to learn why pressure on a particular vertebra increases, or excites, the disease about which we are consulted, why it at one time excites headache, or croup, or sickness of the stomach;" and so on; and again, "Why in some instances any of these complaints may be called up at will by touching a corresponding point of the spinal chain?" "Why that point should always be sore to the touch in such attacks, . . . " and so on.

These observers analyzed 148 cases of various disorders and grouped them according to regions of spinal tenderness, and the complaints arranged themselves in groups as the following table† shows:

Cases.	Prominent Symptoms.
Twenty-eight cases of cervical tenderness, 8 men; 8 married, 12 unmarried.	Headache, nausea or vomiting, facache, fits of insensibility, affections of the upper extremities. In 2 cases only, pain of stomach; in 5, nausea and vomiting.
Forty-six cases of cervical and dorsal tenderness, 7, 15 married, 24 unmarried.	In addition to the foregoing symptoms, pain of stomach and sides, pyrosis, palpitation, oppression. In 34 cases, pain of stomach. In 10 cases, nausea or vomiting.
Twenty-three cases of dorsal tenderness. 4, 0--- 6 married, 16 unmarried.	Pain in stomach and sides, cough, oppression, fits of syncope, hiccough, eructations. In one case only, nausea and vomiting. In almost all, pain of stomach.
Fifteen cases of dorsal and lumbar; 1 man; 11 married, 3 unmarried.	Pain in abdomen, loins, hips, lower extremities, dysury, ischury in addition to the symptoms attendant on tenderness of the dorsal. In 1 case only, nausea.
Thirteen cases of lumbar tenderness.	Pains in lower part of abdomen, dysury, ischury, pains in testes or lower extremities, or disposition to paralysis. In 1 case only, spasms of stomach and retching.
Twenty-three cases, all of the spine; 4, 0--- 4 married, 15 unmarried.	Combines the symptoms of all the foregoing cases.
Five cases; no tenderness of spine.	Cases resembling the foregoing.

These early writers thought that a goodly number of disorders originated in irritation in the region of the cord, as do certain writers of to-day. They state, moreover, that acute inflammations were not evidenced in the back, but disorders, such as fevers, etc., showed symptoms of tenderness, and noted in cases of metastases a corresponding migration in spinal tenderness. The book is so interesting that one is tempted to write more about facts and inferences, etc., and to speak of their remedies of blisters and leeches applied over the tender areas, along with their results, but this would become too lengthy, so the reader is referred to the book.

Shortly after this Marshall Hall (1841) published his work establishing the status of a spinal reflex, thus opening the way for an understanding of why there is pain in the vertebræ, referred to by the Griffin brothers, and physiologic and anatomic research has accumulated from that time to this. Methods of therapy since 1834 have fluctuated from the pole to the antipodes, leaving leeches and blisters in the background, and have included massage, hydrotherapy, electricity, mechanotherapy, osteopathy, Christian Science, and what not. Many of the therapeutic methods have accomplished excellent results.

It is the purpose of this paper to bring together enough evidence to show that the many procedures of external therapy have been based on the principle of the spinal reflex demonstrated first by Hall, and evidence of which was clinically shown by the Griffin brothers, and that the diseased part, when it is not in a quiescent stage, shows itself reflexly by means of tenderness in the para-vertebral tissues.

Dana, in his clinical study of neuralgias, in 1888, divided the surface of the body into sensory areas in which were associated pains from various organs. He noted the sensory nerves which originated in these areas and correlated them with the sympathetic ganglia supplying these regions.

Head, in 1893, demonstrated still more accurately the cutaneous areas and maximal points of pain related to the viscera and their corresponding spinal segments. The accompanying figures show his results. It can be observed that the tender areas noted by both investigators agree substantially with the regions of the tender vertebræ recorded by the Griffin brothers seventy-three years ago.

Henrik Kellgren, in Sweden, in the early days of his practice observed that inflamed or irritative conditions of various internal organs, etc., are in most cases accompanied by tenderness in various spinal nerves, which is especially marked over the sites of the communicating cords to the sympathetic ganglia; moreover, it has been established clinically that friction over tender areas can lessen the morbid conditions of the parts specified.

P. H. Ling (1834) noted tenderness in heart affections when frictions were practiced over the fourth or fifth dorsal nerves of the left side.

The Swedish gymnasts have established areas of tenderness for various organs, over which they apply frictions, vibrations and massage. These do not in every case correspond to the tender skin areas of referred pain, as determined by Head, but they do not vary any more than observations by different individuals are apt to. In many cases the tenderness can only be elicited by deep pressure, not merely by touching the skin. The Swedish school regards the amelioration which takes place in morbid conditions of various organs, consequent on nerve manipulations, as being possibly analogous to that occurring in the case of muscles, stimulation of the sensory nerves over the muscles causing increased growth and activity. They also consider that a vasomotor element may be present. They find in morbid conditions of the stomach, in many cases, tenderness of the sixth, seventh and eighth dorsal nerves on the left side; friction on these nerves may cause eructations. In morbid conditions of the pylorus the same nerves on the right side are often involved. A book by Edgar F. Cryax, p. 164 "Kellgren's Manual of Treatment," gives in specific detail the parts regarded by the gymnasts as being related reflexly with internal organs.

Lauder Brunton* has graphically described the action of a mustard plaster. The efficacy of blisters is well known. They act as an irritant, and hence cause dilation of the peripheral vessels and contraction of the deeper channels. Manual movements and massage reflexly produce the same phenomena.

* Read in the Section on Nervous and Mental Diseases of the American Medical Association, at the Fifty-eighth Annual Session, held at Atlantic City, June, 1907.

* From the Department of Neurology in the University of Pennsylvania.

† This table is taken from the original publication, and the figures are copied as given.

* Principles of Pharmacology.

It has long been known physiologically—that repeated light, mechanical pressure to the skin calls into activity the vasoconstrictors, and that steady pressure evokes vasodilation. Likewise, hydrotherapists have shown that long continued applications of cold, and brief applications of heat, produce sedative effects or dilation of vessels, while prolonged heat or brief exposure to cold produce exciting effects or contraction of surface vessels. It requires but the interpretation of a number of hydrotherapeutic and electrotherapeutic cases to demonstrate that there is a marked parallelism between the effects of hydriatic applications and the effects produced by electricity, if applied with scientific precision.

The researches of Brown-Séquard, Charcot, Winternitz, Benjamin Barac, Fleming, Simon Baruch, Chapman and other hydriatists have established a distinct relationships between the following named external and internal regions, respectively:

1. Scalp and skin covering neck, upper part of back and face, with the brain. 2. The precordial region, with the heart. 3. The skin covering the chest, with the lungs. 4. The middle dorsal region and epigastric region, with the stomach. 5. The lower third of the sternum and lumbar region, with the kidneys. 6. The skin overlying the liver and spleen, with these organs. 7. The umbilical region, with the intestines. 8. The epigastric, the lower lumbar and sacral regions, inner surface of thighs and the feet, with the uterus and ovaries.

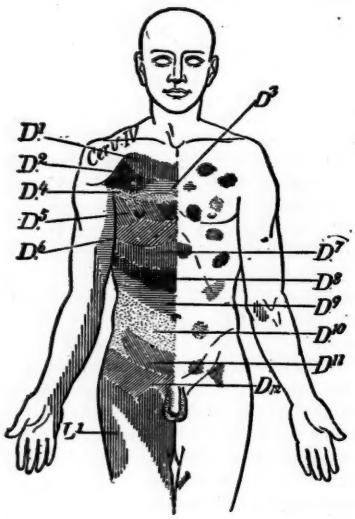

Fig. 1.—Anterior cutaneous areas and maximal points of pain related to the cord segments (Head).

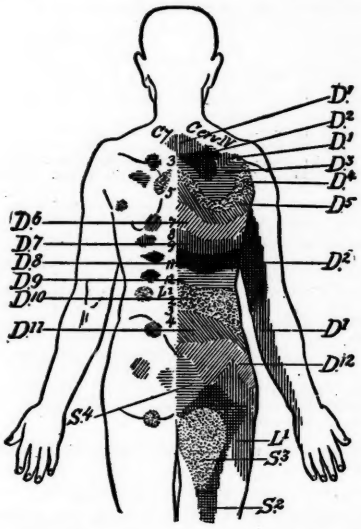

Fig. 2.—Posterior cutaneous areas and maximal points of pain related to the cord segments. Relation of cutaneous areas to viscera according to Head. 1—3 D, heart; 1—5 D, lungs; 6—12 D, stomach and intestines; 1—4 S, bladder; 10 D—4 S, genitalia.

In general, the skin overlying an organ is reflexly associated with it, which is the reason why applications of electricity over an organ usually influence it, and not altogether because the current is passed through the organ. When these areas are studied comparatively, it is noted that they are practically the same as those regions pointed out as showing reflex pain, which would suggest a nervous path from the organ to the skin and from the skin to the organ, the terminations of which are in the same visceral and cutaneous fields.

Clinically, the evidence is conclusive that we get reflex pain in disease from the heart in the precordial region. Head has demonstrated pain in areas marked 1, 2, 3 dorsal, in his diagram, which include the precordial region, all of which is embraced in the sensory distribution of the 1, 2, 3 and 4 dorsal segments, and which is the area described by Brown-Séquard and the above mentioned investigators as reflexly affecting the heart.

I am aware that the statements I shall make in this paper may require some amendment, but the main outlines will be found to be true. The skin areas of dorsal segments 1, 2, 3 and 4, which include the precordial region and encircle the body at the level of dorsal vertebræ 1 to 4, as shown by Thornburn, Sherrington and others (these would include Head's areas) would be in direct relation to the accelerators of the heart, which are located in the first, second, third and fourth segments of the cord.[1] It is well known that prolonged application of ice to the heart area inhibits active accelerations, whereas short applications accelerate.

Inhibitory fibers to the heart come by way of the vagus from the spinal accessory nucleus. They constitute an outflow of the autonomic system, as this nucleus is in close relationship with the autonomic system described by Langley and shown embryologically by Streeter. They unite with fibers from the inferior sympathetic ganglion to form the cardiac plexus (also autonomic fibers). Inhibition is obtained by stimulation of the vagus, and also by prolonged applications of cold over accelerators in dorsal segments 1, 2, 3 and 4, as shown by brief applications of ice to the heart region hastening the movement, while prolonged cold to the same region produces inhibition. Reflex inhibition of the heart is familiar to every laboratory worker who has seen slowing of the heart by stimulation of the centrol end of sensory nerves.

Howell says: "Few subjects in physiology are of more practical importance than that of vasomotor regulation; it plays such a large and constant part in the normal activity of the various organs." The impetus to study vasomotor phenomena was given by Claude Bernard when he discovered that by cutting the sympathetics in the neck of a rabbit, the blood vessels in the

1. Howell's Text-book of Physiology, 1906, p. 531.

ear on the corresponding side became very much dilated, and that stimulation of the peripheral end caused the ear to become blanched. Streeter's (Johnstone, "Anatomy of Vertebrates") drawing of nerves in a six weeks' embryo shows the close relationship the spinal accessory and vagus bear to the sympathetic system and to the spinal system. While the vagus distribution spreads over a good deal of visceral territory, yet facts from anatomy in lower vertebrates would indicate that the viscero-sensory tract was spinal.

In fishes and other lower vertebrates there exist visceral afferent fibers taking impulses from the viscera to the central nervous system. The visceral afferent fibers form a component part of each of the dorsal nerves of the trunk and head, with the exception in most vertebrates of the trigeminus and ophthalmic profundus nerve. In the trunk the fibers have their ganglion cells in the spinal ganglia and pass by way of the white rami communicantes through one of the ganglia of the sympathetic nerves to certain of the organs of the viscera.[2]

In the spinal cord these fibers have their central endings in a part of the gray matter lying at the base of the dorsal horn, known as Clarke's column, and perhaps

Tracts from higher brain centers bring impulses to both somatic and visceral motor nuclei, but much remains to be done to explain the mechanisms by which somatic and visceral activities are correlated. Collaterals from afferent visceral fibers directly to the visceral efferent nuclei are probably present in mammals. The short viscero-motor connections form a two-linked chain between the viscero-sensory and viscero-motor apparatus. It is reasonable to assume that in fishes tracts from the cerebellum, or mesencephalic nuclei, bring impulses to the visceral motor nuclei, especially for the coordination of somatic and visceral muscles in the act of seizing food. This is in accord with the conception that the cerebellum exercises a coordinating action on the viscera.

Reasoning by analogy from lower mammals and work on human anatomy by Langley, Onuf, Gaskell and others, it seems proper to describe the anatomy as has been done above, and noting that in each segment of the cord we may have a viscero-sensory ending, a viscero-motor center, connecting collaterals to each other and cephalward; also from this same segment are sympathetic fibers and sensory fibers from the skin. We can locate these segments by changes in sensation, as did

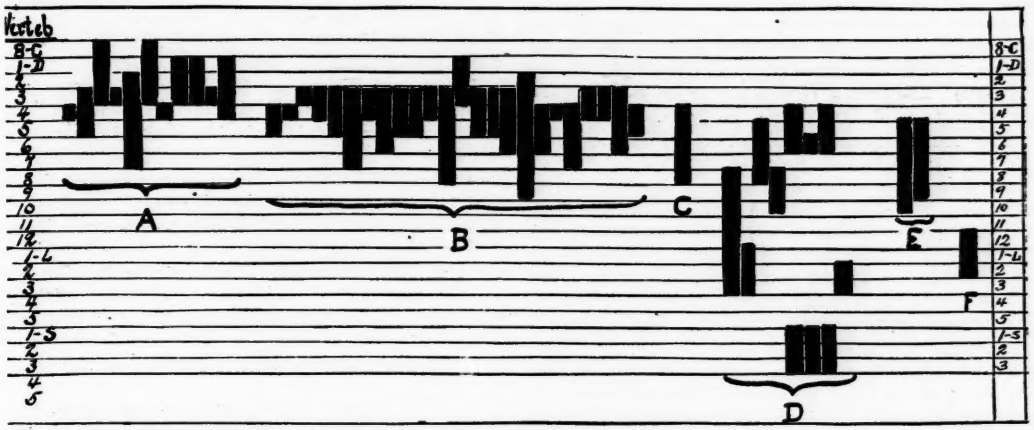

Fig. 3.—Diagram showing tender points over vertebræ in diseases (A) of the heart; (B) of the lungs; (C) in injury of stomach; (D) in typhoid; (E) dysentery, and (F) helminthiasis. Eachvertical black bar represents one case.

with other cells which lie near the median plane dorsal to the central canal. This column of cells and its central relations have recently been proved to be the central ending of sympathetic sensory fibers in certain organisms. The cells in Clarke's column pass lateralward to the surface of the cord, and thence cephalward, forming the direct cerebellar tract (column of Flechsig) which enters the cerebellum, ending in the vermis. This fact suggests the possibility that the cerebellum is useful in coordination of visceral function.

In lower vertebrates the efferent viscero-motor fibers go directly to the smooth muscles, glands, etc. In higher forms the sympathetic system is interposed. The visceral efferent nuclei in the cord occupy a position dorsal to the ventral horn, between it and the visceral afferent column. In human anatomy this has recently been emphasized by Alexander Bruce.[3] The fibers from these cells pass, some out of the dorsal root and some out of the ventral root of the cord, depending on the height in the developmental scale of the animal.

2. Johnstone's Anatomy of Vertebrates.
3. Alex. Bruce: Rev. Neurol. and Psychiat., 1907, 1.

Head, or by cutting roots, as did Sherrington. Each segment may be affected by altered conditions in the viscero-sensory tract. The tonus of the segment is altered perhaps, consequently the afferent sensory fiber from the skin is hypertonic and a sensation of pain is felt. By applying heat or cold or other stimuli to the segment of skin whose endings are in a segment in which arise viscero-motor, vasomotor or other activities, we can reflexly affect the organ supplied by these tracts.

That this can be done has been shown by the researches of Brown-Séquard and others already mentioned, chiefly through the vasomotors. The change may be observed by heat and cold, impact of water, hand pressure, steady or alternated, electricity, mechanical stimulation or other means, yet the underlying principle remains the same.

In the digestive tract the vasomotor centers for small intestine and stomach have been located in the cord in dorsal segments 6 to 12.

Dana's areas of reflex neuralgia for stomach come in the region of the skin segments supplied by fibers from cord segments holding vasomotors to the stomach

and small intestine. We find in the stomach and intestines, according to the skin areas of reflexed pain, that the segments involved are the sixth to ninth dorsal inclusive.

My own observations in cases of affection of the heart would indicate that when the heart is not in a state of compensation or is not in a quiescent condition, tenderness is found in one or more of the first four dorsal vertebræ and often exhibited in the contiguous erector spinæ muscles when firm pressure is exerted over these parts; in addition there may be tenderness in the skin, in any part of the skin distribution of these segments of the cord, as shown by Head.

In ten cases where the heart was markedly distended, firm pressure over the spinous processes provoked a feeling sometimes of acute pain, sometimes of tenderness. The sensations, as shown in Figure 3, A, were mostly confined to the first four vertebræ and the contiguous erector spinæ muscles. When vertebræ below the fourth showed pain there were other factors entering into the case, such as marked dyspnea and constipation or other diseased condition.

In twenty-nine cases of tuberculosis of the lungs twenty-five of them showed well demarcated tenderness in vertebræ ranging from three to six inclusive. Where there were marked digestive derangements the tenderness was continued down the spine to the ninth dorsal vertebræ. Conditions of asthma and pneumonia showed tenderness in the same vertebral regions as did tubercular cases (Fig. 3, B).

Those abdominal conditions which I examined gave evidence of tenderness on pressure from the fourth dorsal vertebræ down as far as the second lumbar, and in some cases there was tenderness over the sacrum, especially in the distribution of the twelfth segment (Fig. 3, C D E F). These areas correspond quite accurately with the vasomotor centers for the digestive tract. The cases were of diseases in the digestive tract, gastritis, typhoid fever, dysentery, etc. This same fact is true of the observations on heart affections, that the vertebral tenderness corresponded with the spinal vasomotor centers. It is also true of the pulmonary conditions that the spinal tenderness was in the same region as the location of the origin of sympathetic fibers going to the inferior cervical ganglia, which is in close relation to the lungs and heart. This ganglion receives fibers from the upper six dorsal segments. In the cord from the sixth dorsal to the second lumbar are the vasomotor cells for the digestive viscera. While they arise as high as the sixth they do not go to the celiac ganglia until they descend in the cord to the level of the eighth thoracic segment and then emerge in the splanchnic nerves.

However, putting aside the peripheral anatomy, we find clinically that our combined areas of tenderness, first thoracic to the second lumbar, correspond with the location in the cord of the column of Clarke and the intermedio-lateral column of cells. Onuf, Collins and others, and lately Alexander Bruce, have called attention to these columns of cells as being the spinal centers of vasomotor phenomena. The intermedio-lateral tract in the lower vertebrates sends fibers out of the cord in both the ventral and dorsal roots. These fibers enter the sympathetic system and form an efferent track. They may be excito-glandular, pilo-motor or vasomotor. Between the column of Clarke and the intermedio-lateral tract we have collateral fibers. Hence, in a segment of the cord, we have an afferent viscero-sensory ending and an efferent sympathetic nucleus, with collaterals connecting them. In this same segment we also have sensory nerve endings from the skin.

Dogiel and Onuf found that the axis cylinder processes of certain cells of sympathetic ganglia terminate in a spinal ganglion around cells of a spinal type, thus establishing the existence of a sensory sympathetic nerve element. Kölliker, on the other hand, claims that there are no specific sympathetic sensory fibers, but that the visceral sensory fibers are the peripheral branches of the T dividing fibers of the spinal ganglion cells. Onuf and Collins have shown that apparently both views are incorrect if adhered to exclusively.

A reconciliation of these contradictory observations can be made if the view is taken that the sympathetic sensory fiber ends in Clarke's column, but that during its passage through the spinal ganglion it gives off collaterals. Such a collateral connection would enable us to localize visceral sensory impressions on the skin surface. Hence, irritation of the visceral sensory nerves will coexcite the neurones for the skin, and the superficial tenderness will locate the visceral disorder. Or it may be, as pointed out by Donaldson, that the peripheral branch of a sensory nerve splits, and that a portion of the same neurone may end both in an organ and in the skin, in which case visceral irritation would so alter the condition of the cell that the skin portion, when touched, would give a sensation of pain.

However that may be, the observations cited in this paper would seem to indicate that the combined vertebral tenderness would coincide with the position of Clarke's column and the intermedio-lateral column, and that the spinal tenderness noted in pathologic conditions of the heart, lungs and digestive tract would coincide with the location of the vasomotor centers in the cord.

By applying heat or cold, or other stimuli to the segment of skin whose endings are in a segment in which arise viscero-motor, vasomotor or other activities, we can reflexly affect the organ supplied by these tracts. That this can be done has been shown by Brown-Séquard, and others already mentioned, chiefly through the vasomotor system.

Recently Meltzer and Auer[4] made an important observation showing the possibilities of visceral changes taking place as a result of peripheral agencies. They have shown that cecal peristalsis of the rabbit is inhibited by dissecting the skin over the abdomen. This is reflex inhibition, for it does not occur if the spinal cord is previously destroyed. On the other hand, previous destruction of the cord does not prevent the direct inhibition of peristalsis observed when the abdomen is opened. These observations are in accord with others in demonstrating what can be done to viscera through reflex action from the skin.

Bayliss and Starling[5] conclude from investigations on animals that the nervous motor mechanism of the small intestine is by way of the vagus nerve, and that inhibitory action is conducted by the splanchnics. They affirm that in the large intestine nervous impulses can arise from the local nerve plexuses, and that the sympathetic supply, by way of the splanchnics, has an inhibitory action, and that the pelvic visceral nerve is motor to both coats. There are, apparently, in the cord centers, vasomotor and motor and inhibitory fibers, all of which it may be possible to affect by impulses going

4. Proceedings of Society for Experimental Biology and Medicines, 1906.
5. Jour. of Physiology, vol. xxvi, 1900, 1901.

from the skin into the segments of the cord containing these centers.

Professor Lennander, of Upsala,[6] states that the pain of intestinal conditions does not emanate from the organ itself, but from the base of the mesentery and from the parietal peritoneum, which is well supplied with sensory nerves. This being so, the reflex pain area in the skin might in all cases not be the correct area to affect in order to cause a change in the visceral area diseased.

Cannon and Murphy, working in the Harvard Physiologic laboratory, point out the fact that inhibition of the intestines, when of central origin, is caused by impulses coming by way of the splanchnic nerves. Hence, any agent that will check the inhibitory impulses from the cord to the intestinal canal will permit the canal to resume its normal functioning, and we might also expect that any agent that would stimulate the inhibitory influences emerging from the cord would counteract an overactive peristalsis.

I am of the opinion that by therapy, thermal or manual, applied to these areas of skin whose sensory nerves end in that segment of the cord whence also originate vasomotor and viscero-motor fibers to the organs, we can produce a change in the functional status of those organs. The application of these physical forms of therapy must be made more and more accurately to get the best effect. In lung affections, manipulations or cold applications should be made over the fourth, fifth and sixth segments and not include the region of the first, second and third, because these last are more closely connected with the heart, and we should avoid producing the same effect on the heart, as we do not wish this effect to complicate that of the lung condition. This same principle is true of abdominal affections. If an ice bag is placed in contact with the whole length of the spine the same effect on the heart and lungs is produced as that which is desired on the intestines, and the whole process is negative, whereas if limited anteriorly to the sixth segment the effect is localized on the abdominal viscera.

If we wish to create a dilatation of the abdominal vessels we do not want also a dilatation of the thoracic vessels, else the abdominal viscera are not flooded with blood, as desired, because the thoracic organs are dilated by the same stimuli. This also occurs if the application overlaps the thoracic segments.

This accuracy of application to specific segments is the underlying principle of the successful carrying out of a number of different forms of physical therapy. An ice bag applied to the spine from the sixth vertebra on down will influence diarrhea; if applied above the sixth vertebra the heart and lung vessels are also affected, and a large part of the effect is lost. If a warm application is made over the first to the sixth thoracic vertebræ the combined applications then work together by contracting thoracic vessels and dilating the abdominal, which is just the effect desired. Electrical applications should be given, using similar principles.

This is true of massage to the back; a relaxing effect can be given from the sixth vertebra on down, and a quick contracting effect from the first to the sixth. By this means the abdomen is flooded with blood under a good pressure and certain conditions are cured.

DISCUSSION.

DR. WILLIAM BENHAM SNOW, New York City, confirmed what Dr. Ludlum said. The relation of the points of spinal tenderness to visceral troubles has been demonstrated in the use of mechanical vibration in the diagnosis and treatment of various conditions. The application of static electricity also, when employing the static-induced or wave-currents, which produce deep or superficial tissue contraction or vibration of the regions to which they are applied, are likewise effective in local inflammatory conditions. Furthermore, the treatment of conditions employing the methods for either inhibitory or stimulating effects, and to which Dr. Ludlum referred, are demonstrated to so influence the parts as to either cure disease or relieve conditions to an extent that has been a revelation to those who have investigated the subject. No physical examination will in the future be considered complete either of nervous diseases or in any other pathologic condition without a proper scientific examination of the spine, in the manner described, because of the relationship of these centers to the various organs of the body and of their effects on peripheral conditions, because of the significance of these local points of tenderness. After employing mechanical measures for more than eight years in the treatment of these conditions, Dr. Snow is satisfied that they are of great value.

DR. CHARLES K. MILLS, Philadelphia, was reminded of some of the anatomic investigations of Gaskill and some of the clinico-pathologic observations of Ross, which bear out the principles Dr. Ludlum enunciated—the old one, for instance, of the relation of duodenal ulcer to the irritation or sensory condition of the skin overlying it. It is most likely, he said, that the view of Donaldson, that the splitting nerve fiber sends one portion to the viscus and one to the skin overlying it, is correct. This view gives an explanation of the reason why certain local measures are efficient in deep-seated disease.

DR. MORTON PRINCE, Boston, Mass., called Dr. Ludlum's attention to a paper published some twenty years ago by Dr. Alexander Harkins, of Ireland. The author stated that as a result of an examination of a large number of cases, normal and abnormal, he had found tenderness over the fourth or fifth dorsal vertebra in every case whether normal or abnormal. He laid great weight on the therapeutic results obtained by blistering over these vertebræ. The statement seemed a very extravagant one, but Dr. Prince was sufficiently attracted by the paper to make a series of examinations of the spines of all the patients in the medical wards of the hospital, going from bed to bed indiscriminately. He found tenderness in some part of the spine in a very large percentage of the cases. It was also true that in the majority of the cases when tenderness existed it was over the fourth or fifth dorsal vertebra. The next most frequent point was somewhere near the twelfth dorsal vertebra. At any rate, he found this localized tenderness in the great majority of cases without regard to the character of the disease. It was particularly true in regard to cases suffering from debilitating diseases and neurasthenic conditions. This localization is so common that frequently Dr. Prince has surprised patients complaining of spinal tenderness by placing his finger on the spot without further guidance. These facts have to be taken into consideration when drawing conclusions as to the significance of any special tender points in spinal cases. These facts have a bearing on the interpretation of spinal tenderness as a diagnostic sign in spinal disease.

DR. S. D. LUDLUM, Philadelphia, stated that the tenderness produced by vasomotor disturbance is in the fourth or fifth dorsal vertebra, and yet down as far as the digestive tract, if there is tenderness anywhere, it would be very apt to be in the fourth dorsal vertebra. He did not quite understand how a normal person could have this tenderness. He has found it only in persons suffering from some condition.

DR. MORTON PRINCE, in explanation, stated that he had examined every case in the general medical words, indiscriminately, including only persons suffering from debilitating diseases, neurasthenia, etc., and not normal individuals.

6. THE JOURNAL A. M. A., Sept. 7, 1907.

An Inoffensive Light.—A convenient night light for a sick room in a country house in which there is neither gas nor electricity may be invented by hanging a lantern from a hook screwed into the bottom of an upper window sash on the outside.—*Nurses' Jour. of Pac. Coast*

THE TREATMENT OF PLACENTA PRÆVIA.

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ST. LOUIS.

It might occur to one on first thought that, in respect to treatment, the cases of placenta prævia could profitably be divided into two great classes—the complete and the incomplete. The mortality statistics bear out this thought in a measure, for in a series of 1,300 cases the mortality in the complete variety was 13.4 per cent., while in the incomplete variety it was but 4.3 per cent. In actual practice, however, such a general division is not practicable. In most cases the exact relation that the placenta will bear to the dilated cervix can be determined only after the cervix is well dilated in the process of delivery. The nice grouping of cases that we see in statistics is made after treatment, not before. Of course, there are certain cases which, from the examination, can be definitely set down as placenta prævia centralis or placenta prævia lateralis, but these are exceptional. In the majority of cases, all that can be positively determined by the examination is that the patient has decided uterine bleeding and that the placenta is in the lower part of the uterus. Having determined these two facts, the physician knows that the patient is in a serious condition and that at any hour of the day or night she may have a profuse hemorrhage that may prove fatal. Occasionally, a patient with well-marked placenta prævia goes through pregnancy and labor with little or no bleeding. But this fact should not be allowed to blind us to the imminent danger in those cases in which the hemorrhagic tendency has already manifested itself. Whatever the exact location of the placenta, the fact that it is in the lower uterine segment and that decided bleeding has already taken place, means that the patient is in as great, if not greater, danger than if she were carrying an extrauterine pregnancy.

THE RULE OF TREATMENT.

The only safe rule of treatment in placenta prævia with decided hemorrhage, is promptly to empty the uterus as a life-saving measure.

This is the general rule, with few exceptions. Now arises the question: Why would it not be better to wait until the fetus is viable, or if viable, until it is nearer term? To every one this suggestion comes as a great temptation, and, as the records show, it has cost the lives of many women. Physicians feel that they must strive to save the fetus whenever it can be done without sacrificing the life of the mother. Another fact, however, just as true and just as imperative, is that the life of the mother must receive the first consideration, and must never be unduly jeopardized to save the uncertain life of the fetus. The life of the mother is of far more value, to the home and to the community, than that of the fetus. Even the life of a healthy infant, which has survived the vicissitudes of birth and is in normal independent existence, does not compare in economic value with that of the adult woman.

With the fetus *in utero* in a case of placenta prævia, the chance of ultimate survival is very poor. In a large proportion of the patients left to themselves, labor comes on prematurely and, if the patient survives the bleeding, she is delivered of a weak, asphyxiated infant which has small chance of living very long. Holmes[1] calls attention to the fact that in Read's series of 569 cases of placenta prævia, 65.6 per cent. were premature births; and in Müller's series of 595 infants in placenta prævia cases, 55.3 per cent. were premature. A concensus of other series of cases indicates that only about 40 per cent. of the patients go to term. In those who do go to term, some of the children perish during labor, owing to the hemorrhage, while of the children successfully delivered, many are so weakened by previous hemorrhage on the part of the mother, that their chance of living is much below that of the normal infant.

This holds true even in patients who have been subjected to Cesarean section. In 25 cases of Cesarean section for this condition, 16 children were delivered alive, but 7 of these died before two weeks old—giving a fetal and infantile mortality of 64 per cent.

EXCEPTIONS TO THE RULE.

There are certain exceptional cases of placenta prævia in which it may be advisable to follow a waiting plan of treatment. These are cases in which the hemorrhage is only slight, the placenta evidently being located far to one side, the patient well advanced in pregnancy and the desire for a child so strong that the husband and wife are willing to take considerable risk. But in such cases the waiting must be a *prepared* waiting, i. e., facilities must be at hand for prompt delivery in case a serious hemorrhage should occur.

TEMPORARY PACKING.

Having decided that the uterus should be promptly emptied, in order to save the patient's life if possible, then comes the question as to whether or not to put in temporary packing, until proper arrangements can be made for the serious operation of delivery.

The value and effectiveness of a tamponade in these cases lies in firm compression of the bleeding area between the packing and the presenting part of the fetus or a firm bag of waters. If the presenting part of the fetus is very high or is so movable that it recedes on slight pressure and the amniotic sac is lax, a packing, pushing up from below, is likely to do more harm than good. As there is no counter-pressure, the pressure from below can not stop the bleeding and, in pushing up the cervix, may cause further detachment of the placenta and thus increase the bleeding. Again, a firm packing may start up labor pains and thus cause further placental separation and hemorrhage before the physician is ready to deliver. The cases in which temporary packing is used should, therefore, be selected with care. As a rule, if the hemorrhage is only slight or moderate, it is better not to disturb the parts until ready for delivery—in the meantime the patient should be kept recumbent and with the hips elevated to diminish the blood pressure at the placental site. If the hemorrhage is very severe it is advisable to pack firmly even if there is no resistant fetal part to make counter-pressure, as the firm tamponade may possibly stop or at least check it somewhat.

In those exceptional cases of slight bleeding in which it may be desired to carry the pregnancy further along, packing should on no account be used, as it is likely to start uterine contractions at once.

In packing, the Sim's posture will usually be found best. The gauze should be wrung out of some antiseptic solution, for gauze which has been wet and then squeezed

* Presented at the inaugural meeting of the Obstetric Section of the St. Louis Medical Society, Jan. 28, 1908.

1. THE JOURNAL, May 20, 1905.

as dry as possible packs more firmly and is much more effective in checking hemorrhage than is dry gauze. If sufficient gauze is not at hand, a long strip of sterile absorbent cotton may be twisted slightly, squeezed out of the antiseptic solution and packed into the cervix and vagina like a strip of gauze.

Strict asepsis is imperative. If there is any carelessness in this respect the patient who survives the hemorrhage may die later of sepsis. The hemorrhagic feature in these cases is so striking that other dangerous symptoms are sometimes lost sight of. A considerable proportion of the deaths are due not to hemorrhage, but to sepsis, for which the conditions are particularly favorable, because of the abnormal condition of the cervix, due to its being the placental site, and because of the profound anemia and resulting debility. Consequently, extra care should be taken to prevent infection, and yet it is in just these cases that infection more often occurs, because the serious bleeding is likely to lead to a hurried examination with only imperfect disinfection of the external genitals and of the examining hand. Again, the difficulty of accurate diagnosis may lead to repeated examinations by different physicians.

In Strassmann's series of 231 cases of placenta prævia, there were 22 deaths, 9 of which were due to sepsis. In Braun's analysis of 9 deaths from placenta prævia, he found that 5 of the patients died from sepsis.

DELIVERY.

Delivery is a serious procedure in most of these cases and is accompanied with the danger of sudden fatal hemorrhage. Consequently, the physician should take care to provide the required assistants, instruments and materials to meet emergencies that may arise. Two assistants are advisable—one to attend to the anesthetic and the other to assist the operator and attend to the intravenous administration of saline solution if necessary. If the patient is near a hospital she should be moved there. If the bleeding is not severe, or has been checked by firm packing, the removal to the hospital with the patient perfectly quiet on a stretcher is less dangerous than an attempted delivery, with its possible serious emergencies, at the home.

WHAT PARTICULAR METHOD OF DELIVERY PER VAGINAM SHOULD BE CHOSEN?

In the delivery in such a case, three points are to be kept in mind: 1, The dilation of the cervix must be gradual because of the danger of serious laceration; 2, there must be compression of the bleeding area during this gradual dilatation, to prevent dangerous hemorrhage; 3, that method of delivery is to be chosen which gives the best chance of saving the fetus, provided it does not unduly jeopardize the mother. The cervix should be dilated sufficiently to admit two fingers for more accurate examination. In many cases, particularly in multiparæ, this slight dilatation may be accomplished with the fingers, while in other cases a dilator will be needed. This procedure enables us to decide whether the case is one that will probably require only minor assistance in the process of delivery, or one that requires radical interference at once because of imminent danger to the mother.

SPONTANEOUS DELIVERY WITH ONLY MINOR ASSISTANCE.

In this class are those cases in which the patient is near the end of gestation and the bleeding has been only slight and in which the examination through the partially dilated cervix shows that the placenta is to one side (marginal or lateral), and that the head of the child presents normally.

In such a case, simple rupture of the membranes will permit the head to come down against the cervix—thus compressing the bleeding area and at the same time increasing the labor pains. After rupture of the membranes, the patient should be closely watched for bleeding, and the compression of the lower uterine segment by the head may be augmented by pressure on the uterus from above. If strong pains come on and no serious bleeding occurs, the labor may be allowed to progress naturally to its termination, care being taken to prevent hemorrhage in the third stage and afterward.

If progress is slow, or if there is considerable bleeding, a Voorhees bag (improved Champetier de Ribes bag) is introduced and filled with antiseptic solution sufficiently to compress the bleeding area and to produce fairly good dilatation of the cervix as it is gradually expelled. A two or three pound weight is attached to the bag and hung over the foot of the bed. This continuous pressure, besides compressing the bleeding tissue, stimulates the uterus to contraction and also aids in the gradual dilatation of the cervix. If no suitable dilating bag is at hand, a firm tamponade of the cervix and vagina will aid materially in stimulating uterine contraction and in softening and dilating the cervix. In a patient in whom good pains with not much bleeding are present and the head is pressed well down, the packing or bag may be applied without rupture of the membranes. In a primpara in whom the cervix is long and resistant, the firm packing is very effective in softening the cervix and aiding dilatation. The patient must be closely watched, however, for evidences of concealed hemorrhage

After the cervix is dilated, if the head does not advance, though well applied to the inlet, forceps may be used to deliver it; but extreme care must be used in these cases because of the danger of serious injury to the lower uterine segment, by the forceps directly or by a too rapid extraction of the head through the friable and imperfectly dilated cervix. Sometimes in a breech presentation the child may be successfully delivered by this natural process with minor aids, but not so often as in a head presentation.

RADICAL INTERFERENCE BECAUSE OF IMMINENT DANGER TO THE MOTHER.

In this class are the cases in which there has been considerable hemorrhage and more is threatened, in which there is an abnormal presentation or the presenting part does not apply itself well to the pelvic inlet, and in which the placenta prævia aprroaches the complete variety. In all these conditions radical interference is indicated to bring about firm compression of the bleeding area. This object must be attained with a minimum disturbance of the cervix and adjacent placenta. The best way to accomplish this firm compression is to introduce two fingers through the slightly dilated cervix and, by bimanual manipulations, carefully turn the fetus so as to bring a foot over the internal os (Braxton Hick's bipolar verson). The membranes are then ruptured, or the placenta ruptured if the membranes can not be reached, and one foot is grasped and quickly brought outside. This brings the buttocks of the fetus down against the lower uterine segment, and the bleeding area is thus firmly and quickly compressed between the fetal body and the pelvic wall. In

order to maintain this compression of the bleeding area during the process of gradual delivery, slight steady traction on the leg is useful. This continuous traction may be conveniently maintained by tying around the ankle a strip of gauze to the other end of which is attached a two-pound weight. The weight is hung over the foot of the bed. The body of the fetus is thus used as a plug to prevent fatal hemorrhage, while at the same time it gradually dilates the cervix. To bring the fetal body well down against the cervix, the leg is to be brought out until the knee appears at the vulva. Only one foot should be brought down, for the buttocks make a much better plug when one thigh is flexed against the abdomen than when both thighs are brought down together.

The reason for not delivering at once is that it may lead to the death of the mother. In these cases the lower uterine segment is so friable and so easily torn that it is a most dangerous procedure to pull the fetus forcibly through it or even to attempt rapid manual dilatation. In the 22 fatalities in Strassmann's series of placenta prævia cases, 7 of the deaths (almost one-third) were due to laceration of the uterus caused by rapid extraction of the fetus. In Edgar's 9 cases of placenta prævia, the only death was one due to rupture of the uterus caused by rapid manual dilatation of the cervix.

During delivery I think that it is well to give ergot in sufficient quantity to bring the uterus under its influence, in anticipation of the dangerous third stage of labor, as profuse hemorrhage may occur during the third stage or soon after. As the body of the fetus is delivered, the assistant must follow the uterus down by abdominal pressure and hold it there in order to prevent undue relaxation. Then the operator must give close attention to preventing serious hemorrhage during the delivery of the placenta. As soon as the placenta is delivered, the operator should forestall postpartum hemorrhage by a firm tamponade of the birth canal, which should extend into the uterus and be very firm. Other measures preventive of postpartum hemorrhage are also to be employed. These are: The administration of ergot and strychnin, manual compression and stimulation of the uterus through the abdominal wall (replaced later by the pressure of a firm compress) and close watching of the patient to detect and combat any bleeding as soon as it begins.

The necessity for watchful care in this respect may be emphasized by the following reported case.[1]

A young married woman in a wealthy family in one of our large cities was pregnant for the first time. When the pregnancy had advanced to the seventh month there was rather severe hemorrhage, and in consultation it was agreed that placenta prævia centralis was present. The desire for a child was so great that it was decided to try to tide the patient over a considerable period in order to give the fetus a better chance. Suddenly an alarming hemorrhage occurred. The physician, as soon as he could reach the house, turned and delivered an asphyxiated fetus, with which he and the nurse labored enthusiastically, congratulating themselves on the possibility of its survival. When they turned their attention to the young mother, who had been ignored for a short time, they found she was dead of postpartum hemorrhage.

The hemorrhage may be most difficult to control. Behm, who treated fifty-two cases of placenta prævia without a death, mentions one desperate case in which he almost lost the patient through postpartum hemorrhage. Failing to stop the profuse bleeding with ordinary measures, he finally, in despair, packed against the bleeding area in the uterus a large tampon squeezed out of pure liquid carbolic acid, and on top of this two more were quickly packed in. This stopped the hemorrhage and the patient recovered without ill effect, though carbolic acid poisoning was feared. In two subsequent cases he used the same treatment with the same result, and he recommends that carbolic acid he always at hand to be used in such emergency. The vagina was protected by a coating of oil.

CESAREAN SECTION.

Cesarean section as a method of treatment in certain exceptional cases of placenta prævia has given rise to much acrimonious writing and debate. I think that the wide difference of opinion expressed is due largely to the lumping together of the various classes of cases of placenta prævia on the one hand and the various circumstances for Cesarean section on the other. For example, a writer from one extreme, looking at the general statistics of placenta prævia and of Cesarean section, argues forcibly that Cesarean section is an improper and unjustifiable procedure for placenta prævia —certainly a logical conclusion when considering the subject in general. A writer on the other extreme, looking only at the most severe cases (placenta prævia centralis) and at the results of Cesarean section by experienced operators and only in most carefully selected cases, argues forcibly that Cesarean section is an advantageous method of treatment in placenta prævia—and with good reason. Looking closely at these two propositions we find that really they express no difference of opinion.

It is only in those exceptional cases in which a fairly certain diagnosis of placenta prævia centralis can be made in the preliminary examination, that Cesarean section is to be taken into consideration. In these cases, the mortality by the usual methods of treatment, even in the hands of experts, is high. In a series of 350 carefully tabulated cases of complete placenta prævia handled in the antiseptic period (since 1877) and by experienced men (Schauta, 50; Strassmann, 56; Driessen, 53; Doranth, 50; Fournier, 2; Knoblanck, 86; De Lee, 6; Amadi and Ferri, 28; Behm, 20), the maternal mortality was 13.4 per cent. and the fetal mortality 80.5 per cent. Thirteen per cent. is certainly a very high mortality for any pathologic condition which is confined wholly within an uninfected uterus in a patient in fair general health. I can not escape the conviction that it is too high, i. e., that it could be materially reduced if the patients were given the best of treatment from the onset of the trouble until its termination.

Now comes the question: Does this "best treatment" include Cesarean section (classical or Porro) in certain selected cases, or, on the other hand, is it confined entirely to the methods already given in the general rule of treatment? So far, not enough cases of the central variety, properly selected and handled with proper surroundings and technic, have been subjected to this operation to decide certainly whether or not it is really advisable. This much, however, is known positively—no patient should be subjected to Cesarean section by anyone who is not thoroughly qualified, by reason of extensive obstetrical and surgical experience, to select the cases and the form of operation with due care and to perform the operation by a reliable technic. The brilliant results obtained by certain operators in Cesarean

section in general, were due to three factors: (1) A rigid selection of cases, by the absolute exclusion of all cases in which there was even a remote probability of infection (i. e., all cases in which there had been any examination in which the antisepsis was doubtful); (2) perfect facilities for the operation; (3) the performance of the operation according to the most approved technic and by a master hand. The indiscriminate use of these statistics by the radical advocates of Cesarean section, has done much by encouraging the attempt at this serious operation under adverse circumstances.

In regard to the fetus, the chance of its survival in placenta prævia centralis is ordinarily so small that it should not be given much weight when deciding on the method of rescuing the patient from her dangerous situation. On account of prematurity and debility the fetus dies in nearly all cases, whatever the method of delivery. Again, the advantage of the slightly increased chance of the survival of the fetus through Cesarean section is more than overbalanced by the disadvantage of the subsequent sterility from the loss of the uterus—for experience so far indicates that the Porro operation is decidedly safer than classical Cesarean operation in these cases.

SUMMARY.

My conclusions are as follows:

1. The general rule for the treatment of placenta prævia is to empty the uterus, *per vaginam,* according to the directions previously detailed, as soon as proper preparations can be made. I am satisfied that if the principles laid down under "Spontaneous Delivery" and "Radical Interference" were strictly followed in all cases from the very first, the mortality in all classes would be materially reduced. That the mortality can thus be reduced is shown by the work of Behm. In eighteen years, Behm treated 52 cases of placenta prævia without a death. And among them were 20 cases of placenta prævia centralis. These truly remarkable results were not due to chance, but to a most careful application of the principles of treatment. His remarks, when discussing the subject, show that he had an unusually clear insight into the causes of death in these cases and that he made a close study of the measures to prevent death. The treatment employed was practically that detailed above. One point on which he lays great stress is that the dilatation of the cervix and the expulsion of the fetus should be slow and spontaneous. This slow spontaneous expulsion of the fetus, extending over a period of from one to ten hours, has four distinct advantages: (a) It prevents serious laceration of the uterus, to which many deaths are due; (b) it gives time for thrombosis to begin in the uterine sinuses, thus tending to prevent the alarming postpartum hemorrhage which comes so frequently in these cases; (c) it allows the abdominal circulation gradually to adjust itself and thus prevents the sudden circulatory disturbance and shock ("anemia of heart," "anemia of brain") which have caused sudden death following rapid delivery; (d) it gives time to administer saline solution and other stimulants, thus preparing the patient for the dangerous third stage. Zweifel, in a recent article, calls attention to the fatalities caused by procrastination in placenta prævia and by imperfect antisepsis in preliminary examinations. He reports 274 cases of placenta prævia with a mortality of 8 per cent. Of the 22 patients who died, each one had lost a quart or more of blood before entering the maternity or had infection already under way. He urges prompt removal of the patient to a hospital whenever there is a suspicion of placenta prævia, to avoid the blood loss and infection attendant on outside delay.

2. In certain exceptional cases, already mentioned, a waiting plan is permissible, but it must be a prepared waiting, i. e., facilities must be at hand for prompt delivery in case of sudden threatening hemorrhage.

3. In certain selected cases of undoubted placenta prævia centralis, the question of delivery by Cesarean section (classical or Porro) comes up. For the present the decision must rest largely on the special circumstances of the case, keeping in mind the important points previously mentioned. For this limited class of cases, the formulation of a positive general rule must await future experience. In the meantime, Cesarean section, if employed at all, should be employed only by operators of large experience and with exceptional facilities. Under ordinary circumstances, the delivery *per viam naturalem* is so far superior to Cesarean section that the latter is not to be considered.

PRACTICAL VALUE OF MODERN CONCEPTIONS OF SYPHILIS.*

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OMAHA.

Notwithstanding the fact that syphilis is probably the oldest disease of humanity, and that it always offered abundant material for investigation, because not influenced by differences of climates and peculiarities of races, its etiology, up to very recent times, was entirely obscure. During the past 25 years claims have been made repeatedly that the specific organism has been found at last, but none stood the test of scientific requirements. Not until May, 1905, when Schaudinn and Hoffman published their first report on their new discovery, was any real progress made. Since that time their investigations have been taken up by scientists all over the world, and innumerable articles, reviews and discussions testify to the validity of their claims. Authorities are agreed now that finding the spirochetes is positive evidence of syphilis, while failure to do so can not be accepted to be of any value.

The *Spirochæta pallida* does not belong to the species of spirilla, as was believed at first, but is more closely related to the protozoa than to the bacteria. Two varieties are known, the *S. pallida* and the *S. refringens.* Only the first variety enters into the etiology of syphilis. The *S. refringens* is thicker, has blunt ends, and stains blue with the Giemsa stain. The *S. pallida* is a long thin organism of a spiral or cork-screw shape, with from 6 to 14 turns, has pointed ends and stains red. It is 4 to 10 mm. long and about ¼ mm. wide, rotates around its long axis when moving, and shows undulating motions when at rest. It takes the stain only very slightly and appears very pale in the specimen, whence its name. On this account, considerable time must be spent to find it, and even when present it is visible only to the trained eye. As it is irregularly and unevenly distributed, a number of slides should always be prepared. Loeffler's alkaline methylene blue may be used for staining, but the stains of Giemsa, Goldhorn and Hastings are preferable.

The method of preparing the slides is as follows:

* Read before the Southwestern Iowa Medical Association, Creston, Iowa, Feb. 20, 1908.

The lesion is scraped lightly so as to get a little blood-tinged serum; a thin film is made, dried by passing it through an alcohol flame, and fixed by immersing it for five minutes in alcohol and ether. The stain is applied for 20 minutes, and is then washed off by dipping the slide slowly into water, film side down, so as to avoid precipitation. The slide is then left standing upright until dry.

The spirochetes can also be examined alive in fresh tissues and kept so for several hours in physiologic salt solution. This allows a quick and positive diagnosis. It is done with the help of the so-called ultramicroscope, which consists of a special arrangement of a substage condenser and the use of an arc lamp for illumination. The principle, in general, is the same as the well-known one that if a room is darkened, and a small beam of intense light is admitted, dust particles, floating in the air, become visible in the ray of light which are not seen in the room when fully lighted. The complete apparatus, which is somewhat expensive, consists of an arc lamp surrounded by a metal box having a diaphragm arrangement to produce a small ray of light, the special condenser, and a suitable assortment of objectives and eye pieces. The scrapings from the suspected lesion are thinned with water, placed on an extra thick slide, protected with paraffin to prevent too rapid drying, and examined under the microscope in the usual way. The field appears dark, with the spirochetes slowly moving about as silvery looking spirals.

The spirochetes were first found in all primary and secondary lesions of the superficial and deep layers of the skin, and in the regional glands. Now they have been demonstrated in practically all organs and also in the placenta in hereditary syphilis. In early lesions they are found constantly, but as the manifestations grow older, they become less frequent and are seen with increasing difficulty.

The discovery of the organism in late manifestations has shed a new light on our knowledge of tertiary syphilis. Heretofore gummata were thought to be innocuous, as being due to toxins only, and appearing after the active virus had exhausted itself. It is understood now that they do not mark a period of safety, as regards transmission of the disease, but that they are infectious and without doubt responsible for some cases where the mode of infection was obscure. The spirochetes are, however, found only exceptionally in these late lesions, and in broken down gummata their absence is to be expected through the degeneration of the tissues.

To the general practitioner the practical value of these recent discoveries is naturally of most interest. The difficulties of the staining methods and the necessary training of the eyes will, for some time, limit this work to pathologists and men making a special study of this field. In the majority of cases this will work no hardship, because the clinical evidence and, if necessary, test treatment will be sufficient to make the diagnosis. In doubtful cases, however, the demonstration of the spirochetes becomes a necessity. It must be kept in mind that this can be accomplished only before the patient has taken any mercury. Mercury has an inhibitive influence on the vitality of the germ, and a single administration of it, if given early enough, may destroy it altogether. Metchnikoff makes use of this action by rubbing a 20 per cent. calomel ointment into the parts of the skin where infection is suspected and spreading of the disease seems to be prevented. Numerous experiments of this character made on human beings and on apes prove the practical value of this measure as a prophylactic.

After syphilis becomes consitutional, a prolonged intermittent administration of mercury, extending over years, is essential for a cure. During this time, and especially during the periods of apparent freedom from symptoms, an occasional examination for spirochetes is a valuable help to decide the efficiency of the past treatment and the indication for its continuance. The constant appearance of the organism in primary lesions has an important bearing on the question of the most opportune time to begin the systemic treatment. Until now, the rule was to wait until the general eruption began to show. Common sense dictated treatment at the earliest time, that is as soon as the chancre was recognized as such, to prevent the development and spreading of the disease. This was, however, not put into practice for the reason that a mistake in the diagnosis is possible, no matter how typical the sclerosis appears to be. If, in such a case, treatment were instituted, the patient, never seeing any evidence of the disease, would always remain under the impression of having syphilis, believing that it was kept temporarily in abeyance by the early treatment.

With our present ability to make an early and positive diagnosis, all such scruples may be eliminated. The method of treatment should, therefore, be changed radically. Excision of the chancre, followed by cauterization, seems to be the only rational procedure, not with the expectation of shortening the duration of the disease, but of influencing its further progress favorably by eliminating the breeding herd of the virus. An energetic administration of mercury should follow at once to destroy all germs that may have already entered the lymphatics. Excision also prevents autoinfection.

The treatment of tertiary syphilis can now be placed on a scientific basis. To place our main reliance on the iodids is wrong, as the virus is still active in this stage. Mercury is the only direct parasiticide at our disposal. The iodids are valuable only in promoting absorption of pathologic tissues and in eliminating the toxins. The only rational treatment, therefore, in the light of our present knowledge, must be a combination of mercury and iodids.

The discovery of the spirochetes in late syphilis has also an important bearing on the decision of permitting marriage of a syphilitic. Knowing that late manifestations may appear 10 years and later after a period of freedom, with the germs still lingering in them, renders a decision extremely difficult. That most cases of syphilis are finally cured, is doubted by no one, but the very fact that the disease may manifest itself after long intervals, and be infectious, prohibits taking anything for granted. The only mitigating factor is that the danger is very small, considering that this occurrence is exceptional, the virulence considerably milder, and the location of the lesions such as to make a direct contact improbable.

Schaudinn's discovery serves sypilology in still another direction, the importance of which can not, as yet, be appreciated adequately. Inoculations of animals with syphilis have been tried innumerable times without success, so that it finally became an accepted axiom that syphilis is essentially a disease of man. The reason for the failures was that the effects of the inoculations were different in their clinical appearance from similar

lesion in the human beings, and there was no way to prove that they were identical. Metchnikoff and others have demonstrated that all apes and probably other animals are susceptible to syphilis and can be infected. The primary sclerosis produced in them has the same histologic structure as the human chancre, and can be inoculated again into other apes with the same result. The final proof, however, of their specific character is finding the same typical spirochetes as are found in human beings.

Pure cultures of the spirochetes have not been grown successfully as yet. Until such time we can only speculate on the possibilities of opsonic treatment and other modern therapeutics. But there is no doubt that the danger from syphilis will be lessened. Meanwhile interesting experiments are reported with serum therapy and serum diagnosis. One is the subcutaneous injection of finely mixed chancre tissue shortly after infection. Quite a percentage of patients, so treated, did not show any evidence of syphilis afterward.

The principles of immunization by which an immunizing serum will only give a reaction with material obtained from individuals affected with the same disease, have been employed in syphilis with positive results. One very important fact brought out in this connection, that not every case of locomotor ataxia is of syphilitic origin, will probably definitely settle this very much discussed question. In deciding the specific or non-specific nature of some brain tumors serum diagnosis will become an invaluable help.

In conclusion, reference may be made to our changed ideas on autoinfections and reinfections. Though it was always stated that one infection of syphilis conferred an absolute and permanent immunity, this was never accepted universally. But the few reports of reinfections could never be confirmed. It is known at present that there is a period during the existence of a chancre when multiple autoinoculations occur, and that, furthermore, there is a time limit to the protection conferred on an individual by his first attack of syphilis, after which re-infection may take place again.

The diagnostic feature of one single initial lesion of syphilis, as differentiating it from the multiplicity of chancroids should not be relied on any more. Multiple syphilitic chancres have been reported lately by Taylor and others, appearing simultaneously or successively and in different stages of evolution. Finger's explanation of this recurrence seems most rational: Immunity begins and develops gradually with the first appearance of the primary lesion. It grows in intensity during the secondary stage but never becomes absolute. After reaching its climax it again decreases in its potency until a virus which may have remained latent for a time can produce new pathologic changes, or an infection from outside sources becomes a possibility.

Meningitis from Lead Poisoning.—Mosny and Malloizel summarize 47 cases of lead poisoning with more or less involvement of the meninges. This involvement may not be revealed by any clinical manifestations but the cerebrospinal fluid has specific features. A latent, histologic meningitis seems to be almost constant in persons recently intoxicated with lead, and it always accompanies lead colic. Lead meningitis may appear early and be acute or it may be tardy, acute or subacute, suggesting the clinical picture of general paralysis but distinguished by the absence of dementia and occasional recoveries. Their article appeared in the *Revue de Méd.*, June, 1907.

TREATMENT OF ECLAMPSIA.*

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Eclampsia and infection are the two great scourges of pregnancy, parturition and the puerperium. While the latter, through the introduction of asepsis, has been shorn of much of its terror and placed well within the limits of prevention, the former, because of the insufficiency of knowledge concerning its etiology and nature, is still much involved in hypothesis and theory, its treatment is largely empirical, and its morbidity and mortality high. It is a satisfaction, however, to know that much important work has been accomplished in recent years, particularly in regard to its pathology, which in supporting the toxic theory is thus contributing to a more comprehensive knowledge of the disease. That various toxemias affect the pregnant and non-pregnant alike is obvious, but the trend of opinion favors the belief that there are one or more varieties dependent on the gravid state, which are probably the underlying causes of eclampsia, hyperemesis gravidarum, acute yellow atrophy of the liver and many of the minor ailments and psychoses of pregnancy.

Conformably to the various views held as to the origin of eclampsia, different methods of treatment have been practiced, but the results have remained as uncertain as the theoretic foundations on which the methods have been based. So at the present time we are, unfortunately, without a rational treatment with which to combat this dangerous complication of pregnancy, and in the presence of severe types of the disease are well nigh helpless. The graver forms comprise from 3 to 5 per cent. of the cases in general, they are more frequent at different periods and they may appear in groups.

Such was our experience at Columbia Hospital. After having obtained for several years quite successful results, that is to say, with a mortality of only 10 to 15 per cent., these were followed by a series of cases in which the previously approved treatment absolutely failed, the mortality reaching 70 per cent. These malignant cases are frequently attended with but few convulsions, coma quickly supervening after the first seizure, accompanied by fever, jaundice, hemoglobinuria or a complete suppression of the urine, and they are rapidly fatal.

TERMINATION OF PREGNANCY.

Conceive of the etiology of eclampsia as we may, contend that the poisonous material originates in the fetus or the placenta, or place in the foreground maternal autointoxication because of the insufficient activity of the liver and kidneys, or thyroid inadequacy, or claim that it is due to nervous influence reflected from the genital tract, the one certain, incontrovertible fact is that pregnancy at least is necessary, for without pregnancy there can be no eclampsia. Therefore, the therapeutic conclusion must be that in eclampsia prompt termination of the pregnancy, through the quickest possible delivery of the fetus consistent with safety, is of primary importance and to be considered before all other measures. It is quite possible that the eclamptic patient may withstand the attacks without immediate delivery and the birth may terminate safely. It is, nevertheless, true that many women succumb who are left to expel the fetus unassisted. Therefore the prognosis is much more favorable in a prompt delivery than in one that has been delayed.

* Read at meeting of the Medical Society of Georgetown University, Feb. 8, 1908.

The occurrence of eclampsia is seldom sudden. As a rule there is a gradually developing symptom-complex of a pregnancy nephritis, the daily output of urine decreases, albumin and casts become more abundant, and the edema spreads from the extremities to the hands and face. In spite of a suitable diet and regimen of milk, hot baths and packs, purgatives and diuretics, the action of the kidneys is not improved; but, on the other hand, phenomena affecting the brain and sense organs occur. When headache, vomiting, dizziness, tinnitus aurium and muscæ volitantes persist, then it is highly important to terminate the pregnancy. With the emptying of the uterus the menacing signs quickly disappear and convulsions and other threatening manifestations are averted. If the case is temporized, convulsions may not be prevented, and many formidable conditions are likely to confront the attendant. It is not uncommon to see cases where women have lost their lives in coma after a proposed interruption of the pregnancy had been rejected. But even after the onset of convulsions, immediate delivery is, by all means, the surest measure to control eclampsia.

EVACUATION OF UTERUS.

The more quickly the uterus is evacuated the more favorable is the result. When the first attack occurs, if the soft parts are already dilated and there is no longer any contraindication to the use of forceps or version, rapid delivery is easily accomplished. Such cases, occurring late in the stage of dilation, have, as is well known, a relatively favorable prognosis. It is less promising when the convulsions appear before the cervix is sufficiently dilated. If the cervix is effaced but the external os remains undilated, metal or manual dilatation may suffice to effect quick delivery, in say fifteen or twenty minutes. The same end may also be obtained by the use of rubber bags.

When the cervical canal is not unfolded, metal and manual dilation are liable to cause deep rents, and the rubber bags may act too slowly. Therefore, we have in cases of early onset of eclampsia with intact cervices the operation of vaginal Cesarean section, or hysterotomy which will permit of the evacuation of the uterus within ten minutes. This operation requires skill, and is not to be considered lightly. When properly and early performed it is of great prognostic value. Prompt delivery gives the best results; if one delays, severe lesions of the kidneys and liver parenchyma may develop rapidly, and then even artificial delivery can offer but little help.

USE OF NARCOTICS.

The views regarding the use of narcotics in eclampsia are changing essentially. The extreme was attained through the use, for many years, of large doses of morphia, as recommended by Veit. The protracted administration of chloroform was also practiced, or a mixture of morphia and chloral was given. The treatment with narcotics, especially the hypodermic injection of morphia, is very easy for the physician and assures him yet still greater confidence. The results obtained by it, however, are of little value; the mortality fluctuates around 30 per cent., and, according to the experience of Bumm[1] and others, is quite as great as when nothing is done. Heroic doses of narcotics may undoubtedly forestall the convulsions, and in this manner also hinder the injurious influences which the eclamptic seizures exercise over the respiration and the circulation, but suppressing the convulsions only obviates the symptoms and does not prevent pathologic changes nor cure the eclampsia.

MORPHIA.

Morphia is no antagonist to eclampsia, but, on the contrary, its effect is added to that of the eclamptic poison, as is observed in the already diminishing excitability of the nervous system, the disease is aggravated, the existing coma deepened and fatal conditions favored, in that the respiration and heart's action are weakened and edema of the lungs made more probable. It is better, therefore, in unconscious and comatose cases to withhold the narcotics. In the beginning of the attack, so long as the mind is intact and the susceptibility of the nervous system is preserved, there is no objection to the use of morphia, as its quieting effect exerts a salutary influence.

While eclamptic patients show great tolerance for morphia, as much as 3½ grains being given in twenty-four hours, the patient should be carefully watched for possible idiosyncrasies. I have seen ⅝ grain produce marked physiologic effect, reducing the respirations to twelve per minute, the condition persisting for several hours, even after delivery by vaginal Cesarean section. In another case ¼ grain caused alarming symptoms, slowing the respiration to six per minute.

CHLOROFORM.

Formerly I believed chloroform to be the sovereign remedy in eclampsia, but experience has markedly changed my views. Given at the time of the convulsions, when there is a tendency to asphyxiation, it increases the difficulty by interfering with the supply of oxygen. Furthermore, it is a cardiac depressant, and as this organ has already undergone degeneration, and the blood contains other toxic materials, this, together with its deleterious influence on the hepatic and renal functions, should restrict its administration to the time when intervention is necessary. Chloroform masks the horror of the picture, but in so doing is apt to add fuel to the flames.

CHLORAL HYDRATE.

Chloral hydrate is a very valuable remedy, but the drawback to its employment is its possible rejection when given by the mouth, or expulsion when administered by the rectum. We have used it with happy effect in the prodromal stage and also after delivery. It should be given in large doses, preferably by enema, and in milk, as watery solutions are apt to produce tenesmus.

VERATRUM VIRIDE.

Veratrum viride is much favored in the southern states. It reduces the arterial tension and the frequency of the pulse. As it acts by depressing the heart, the patient must be kept in the recumbent position to guard against syncope. In my judgment, its dangers more than offset its advantages; therefore, I have rarely used it.

NITROGLYCERIN.

Nitroglycerin also reduces the arterial tension, equalizes the blood pressure and promotes diuresis, and we have found it of especial value when these results are desired after delivery.

PILOCARPIN.

Pilocarpin, being a cardiac depressant and favoring edema of the lungs, one of the dangers of eclampsia, should not be used

1. Deutsche Med. Wochnschr., 1907, xlvii, 1945.

Nicholson,[2] believing that eclampsia is due to a disturbance of the relation between the function of the thyroid and metabolism of nitrogenous substances, advocated large doses of thyroid extract to readjust the metabolic process.

THYROID EXTRACT AND PARATHYROIDIN.

Vassale[3] has reported striking results of the controlling influence in eclampsia of parathyroidin, but a more extended use of these remedies is necessary to prove whether their effects are constant and trustworthy.

ELIMINATION.

As is well known, the control of the eclampsia in the majority of cases is attended with the complete restoration of the function of the kidneys. So long as the diminished secretion of urine and marked presence of albumin continues the danger is great. With the increasing excretion the menacing signs usually subside, one after another; the disease is checked, the patient reacts, and often within a few hours returns to consciousness. Quite naturally there arose the idea, entertained for a long time, that by artificially increasing the activity of these organs the way to recovery was prepared. However, experience has clearly demonstrated that diuretics, whether administered internally or subcutaneously, exert only a very small and no constant effect. The principal channels of elimination, therefore, are the bowels, skin and lungs. Croton oil and elaterium are preferable during the attack, because of the ease of administration and the rapidity of action. Where the patient is able to swallow, the saturated solution of magnesium sulphate should be given to further eliminate the poison from the bowels. Hot packs and hot air baths are, when well borne, beneficial. The prolonged use of the latter, however, is inadvisable, as it may cause great depression.

The free use of normal salt solution, subcutaneously or by colonic irrigation, is a rational measure, as it permeates the tissues, dilutes the toxins and promotes elimination by the skin and kidneys. It should be given in large quantities, three to four pints every few hours. It is sometimes surprising how quickly the suppression of the function of the kidney is relieved when it is administered in this way.

VENESECTION.

To guard against aspiration pneumonia it is necessary, in the comatose stage, to regularly free the throat and larynx from the aspired saliva, mucus and blood, and as the breathing becomes embarrassed to resort to artificial respiration. In the presence of a full, quick pulse, cyanosis and labored respiration, great benefit is derived from venesection. This measure has, unfortunately, been replaced in recent years by less effective and more depressing remedies. It is particularly serviceable when the seizures continue after delivery.

LUMBAR PUNCTURE.

Lumbar narcosis has been practiced in eclampsia, but without particular success; likewise lumbar puncture, with subsequent aspirating of the cerebrospinal fluid. Reducing the increased blood pressure to normal has been employed, but with no apparent beneficial effect.

2. Jour. Obstet. and Gyn. Brit. Emp., 1904, v, 32-37.
3. Frommel's Ber., 1905, xix, 796 and 804.

DECAPSULATION OF KIDNEY.

As to whether the Edebohl's operation of decapsulation of the kidney will extend its sphere of usefulness to eclampsia it is not possible to form any definite conclusion from the available data. Franck[4] reports a case of rebellious eclampsia, in which he performed decapsulation of the kidneys, and he compares the results in nine similar cases that have been reported. The eclampsia subsided in his case, but the patient succumbed to an intercurrent pneumonia. The autopsy, seventy-two hours after the decapsulation, showed that the kidney had become firmly adherent to the adjacent tissues, thereby establishing a collateral circulation; and he believes this explains the benefit derived in these cases. Of the ten cases on record the decapsulation was followed by the rapid recovery of six of the patients; in two cases no benefit was manifest, and in the remaining two improvement was probable but not pronounced. In eight cases the women had been delivered before the operation, including one of the cases in which no influence from the operation was apparent. In the other cases the operation had been done before the evacuation of the uterus, the results being successful in only one of them.

It is questionable whether the result in one of Edebohl's cases should be attributed to the decapsulation, and whether the collapse in Polano's case was the result of pulmonary edema. All the other patients recovered. He says: "Even if the mortality of 30 per cent. is ascribed to the operation, it is such a lowering of the average death rate in severe eclampsia in which the convulsions continue after the uterus is emptied, that immediate decapsulation should be advised in all such cases.

PROPHYLAXIS.

However divergent the views regarding the curative treatment of eclampsia may be, there is universal accord concerning prophylaxis. It consists of hygienic, medical and dietetic measures. Good pulmonary ventilation, nourishing and easily digested food, frequent bathing, moderate exercise in the open air, proper clothing, the avoidance of fatigue and exposure to cold, are the principal hygienic measures to be employed.

The frequency of eclampsia could be greatly diminished if more careful supervision of the pregnant woman was exercised. The perfunctory examination of the urine for albumin, during the latter weeks of pregnancy, is not sufficient; the total amount of solids excreted in twenty-four hours should be ascertained. The constitutional signs and symptoms must also be scrutinized closely. When intoxication exists, as manifested by slight digestive disturbance, headache, etc., the regulation of the bowels and restriction of the diet will usually suffice. Persistent headache, vertigo, uncontrollable vomiting, disturbance of vision, insomnia, and neuralgia, showing involvement of the nervous system, will call for more vigorous and active measures. Free purgation, hot baths, absolute milk diet and rest in bed should be enjoined. Diuretics are of secondary importance and of little use until the bowels and skin have been acted on freely.

The medical treatment will vary according to the indications of the individual case. If there be pre-existing cardiac disease, or chronic nephritis, remedies appropriate for these diseases should be used. In the former digitalis, strophanthus, strychnia and other

4. München. med. Wchnschr., liv, pp. 2465-2512.

heart tonics are serviceable, while in the latter nitroglycerin is of inestimable value. In the acute nephritis of toxemia our chief reliance should be on free catharsis and diaphoresis. Mercurials, followed by salines, hot-air or plunge baths, followed by envelopment in blankets, rectal injection of salt solution frequently repeated, citrate of lithia and caffein, and an abundance of water, are the agents that have proved very successful in our hands.

WHEN TO TERMINATE THE PREGNANCY.

If, in spite of vigorous treatment, the volume of the urine is not increased, and the excretion of urea remains stationary or diminishes, together with persistence of menacing constitutional symptoms, it will be necessary, particularly if the fetus is viable, to terminate the pregnancy.

In conclusion, while the etiology of eclampsia is still unsolved, its clinical phenomena and pathology point to a probable intoxication of maternal, fetal or combined origin. Therefore, sedation, elimination and evacuation of the uterus are the chief indications in the treatment. The sedatives are valuable for their tranquilizing influence, while the delivery is being promoted or effected by other direct measures. The result in a given case will depend on the severity of the attack, the judgment and skill of the physician, and the rigid observance of asepsis. Essential to success is a well thought-out plan of prompt but not overzealous procedure based on the various phases of the disease, combined with a knowledge of the condition of the cervix and the changes which it must undergo before pregnancy can terminate or be terminated.

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SOME OF THE MOTOR PHENOMENA OF CHOREA CLINICALLY CONSIDERED.

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The word chorea still stands as the name of a syndrome which we still regard as a disease. When we speak of chorea we mean the juvenile or Sydenham chorea and must use the term with a qualifying adjective if we are speaking of something else, as Huntington's chorea, hysteric chorea, etc.

The distinctive feature of the disease chorea, so far as we yet know it, is its motor phenomenon. In this last statement I would not be understood as claiming that the diagnosis of chorea is never made and can never be sustained in the absence of choreic movements. It is a fact, however, that we always seek for their confirming presence in every questionable case. In the main and in their typical appearance there is no question or confusion as to what is meant by choreic movements. Many classic descriptions of them are to be found and certain expressive catch-words and phrases, to which we still cling, have passed from one generation of writers to another, as "insanity of the muscles," "an exaggerated fidgetiness," "bizarre," etc.

Yet there are a good many instances in which, if we rely on the movements alone for a diagnosis, we will be misled. Some children subject to attacks of chorea never have typical choreic movements; or the movements may occur in one attack and be absent in another attack. I have observed cases with all the somatic and psychic signs, including arthritic, cardiac and the nutritional changes, in which the movements were tic-like from beginning to end. I have also observed very typical attacks of chorea pass, as it were, into conditions of tic. I have full notes of two notable patients, one a boy of 12, another a girl of 9, who, under my personal observation, had severe attacks of chorea, in all respects typical. In each instance there appeared a desperate condition of tic with coprolalia and echolalia. In the boy's case this condition developed as he seemed to be approaching a normal convalescence from the choreic attack. In the case of the girl it came on more insidiously. In both there was a chronic course. The girl, now a young lady, although greatly improved, still has occasional tic movements and some rather troublesome imperative tendencies. The boy, when last seen three years after the onset of his attack, was a physical and psychic picture of tic neurosis.

CHOREIC MOVEMENTS AND TIC.

I believe that the somatic conditions which produce choreic attacks in certain individuals produce rarely tic phenomena in others who are especially predisposed thereto. The distinction between tic and choreic movements is an important one. The tic is an affair of a higher cerebral level, so to speak. It is closely related to psychic functions. The choreic movement, on the other hand, is due to some defect in the motor inhibitory apparatus, physiologically speaking, a comparatively simple cerebral function. Clinically it is quite as important to make this distinction as it is physiologically. The tic is the more important stigma. It is evidence of a more pronounced neuropathic predisposition.

I have dwelt on this point at some length, wishing to emphasize the fact that there are occasional combinations of chorea and the tic neurosis and that my personal experience confirms the recorded experience of others along this line. It was to keep in mind this important fact that some years ago in a published paper I used the words "tic chorea" and "choreic tic," not for the purpose of confusing two things, but with the idea of keeping the distinction before us for practical study in all questionable cases. All observers recognize the frequent combination of chorea and hysteria. Some writers dispose of these tic phenomena of chorea by assigning them all to hysteria. Many of them may be thus disposed of. I do not believe this the proper assignment for all of them, and if we keep well in mind the distinctions between hysteria and the tic malady we will have a clearer conception of some cases. In order to do this we must carefully watch the psychic conditions of the patients. The psychic symptoms are a better guide than the character of the movements in making this distinction in this type of cases.

In this connection I shall not undertake a full discussion of the psychic accompaniments of chorea, of tic and of these juvenile cases of hysteria, but I may briefly so far characterize them respectively as to make more evident the point for which I am arguing. Even in the mildest cases of chorea there is generally a slight psychic change, a lack of tone, of stability, a hypersensitiveness, an irritability. The general asthenic state is reflected in the mental condition. In the graver cases there is an exaggeration of this to the point of actual maniacal attacks, which may last for days or for weeks. And in still graver cases an acute, profound and dangerous delirium appears.

IMPERATIVE AND IMITATIVE TENDENCIES.

The one characteristic of the tic cases is the "imperative" tendency, expressing itself either in imperative movements or imperative ideas, or both. The characteristic of the hysterical cases is the imitative tendency; imitating, on the one hand, the actual choreic phenomena and, on the other hand, the actual tic phenomena or the actual paralytic conditions. It is for the counterfeit, the hysterical pseudosymptom, that we must look and distinguish it from the real. At times it is difficult to do this, especially in the younger subjects. On this point Oppenheim remarks:

Chorea may develop in a hysteric individual, and remain independently of the hysteria, or it may cause hysteria in predisposed persons; or a hysteric chorea may be present; i. e., a neurosis of motility on a hysteric basis which, notwithstanding a close relationship with true chorea, differs from it in many important points.

This expresses very well the problem which is presented in studying these particular cases. On the question of tic in this connection the same author remarks: "In a few cases we find a *partial chorea,* limited to the musculature of speech, or of the eyes, or to the muscles of the lips, tongue, pharynx or larynx. These are severe, although limited in extent and often very stubborn." I would complete this description by adding that attacks of this kind occasionally occur, presenting the severe somatic symptoms of chorea, and that they sometimes distinctly recur in the same manner, and that they sometimes alternate with the ordinary chorea.

It was in trying to characterize this kind of cases that I used the term "tic chorea," i. e., attacks of chorea in which the movements are tic-like. By "choreic tic," on the other hand, I had in mind the picture of certain cases of general tic in which, along with the tic movements, there is a general, jerking, dancing, choreic aspect. Some of these latter cases are called chronic chorea. Some have been mistaken for Huntington's chorea and for hysteria.

The paralysis of chorea I shall only consider briefly. It is often the first prominent symptom and sometimes the most important symptom of an attack. It is sometimes present in the absence of choreic twitching of the slightest kind. Generally, however, by careful observation, we will be able to find characteristic movements in some region of the body and often in the paralytic member or members. The paralysis is more often hemiplegic in distribution than some of the text-books would lead us to believe. It is rarely complete, however, and especially in two members of the same side at the same time. It is often hysterical or has a hysterical exaggeration about it. In some cases the hysterical element in the paralysis is very difficult to estimate. The pathology of it is obscure. In fact, we know nothing about it. Until we do we shall study these paretic phenomena with the same perplexed interest that they have always excited.

SPEECH PHENOMENA.

I will close this fragmentary communication by alluding to a choreic phenomenon which I have occasionally studied with much interest, but without much satisfaction so far as conclusions are concerned. I refer to the speech defect, and especially to some phases of it. As we all know, many of these subjects are very silent. In most instances it is evident that the difficulty is largely, if not entirely, one of motility. The presence of choreic movements in the speech organs makes it so difficult that the patient abstains from talking. In others the silence is due to a sluggish general mentality. A more interesting condition is sometimes noticed in which there is some special psychic defect in the speech faculty; in short, an aphasic state. I recently studied a case of this kind in a girl of 10 years with a rather severe attack of chorea of the paretic type, with severe heart complication. Intellectually she remained very bright and cheerful for an attack of the kind. When the other paretic conditions were largely disappearing she developed an interesting aphasia, an apparent loss in the comprehension of language. Subsequently I satisfied myself that the condition was largely or entirely hysterical.

THE EYE SYNDROME OF DEMENTIA PRÆCOX.

PRELIMINARY REPORT ON OCULAR SIGNS AND SYMPTOMS OF DEMENTIA PRÆCOX AND THEIR SIGNIFICANCE, AS OBSERVED IN 115 CONSECUTIVE CASES.*

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In 1899, Siglas saw a case of anxious melancholia, followed by mental confusion, evolve parallel with gastrointestinal autointoxication. Meyer reported five similar cases. The idea that dementia præcox is an autotoxic disease originated with Morro, who first connected hebephrenia with this cause in 1900. The evidence for its autotoxic nature may be grouped as follows: (1) There is a coincidence of certain ocular symptoms with gastrointestinal autointoxication similar, in many respects, to those seen in typhoid, lead colic, and simple intestinal putrefaction. (2) The urine in dementia præcox shows very defective elimination. (3) Fully one-half of the subjects of dementia præcox die of tuberculosis. (4) The co-existence of certain toxic dermatoses, such as certain types of erythema, vasomotor paresis, with chronic gastrointestinal intoxication, is noteworthy. (5) Some additional facts are at hand, as shown in the co-existence of psychic excesses, neurasthenia, etc., with states of autointoxication. (6) The study of the blood in dementia præcox shows evidence of a toxic state.

More specific evidence is at hand in Kuhnt and in Blin's work, especially the latter. In 1905 Blin published a monographic consideration of the autotoxic nature of dementia præcox. He attempted to show that the retinal changes are analogous to those seen in various acute and chronic infections. It is of passing historic interest to say that Dide and Assicot (1901) had already noted the alteration of anemia and congestion in the discs of dementia præcox. None of these various observers have made any thorough or systematic attempt to analyze the significance of the eye changes in dementia præcox.

The subject of the ophthalmoscopic changes in dementia præcox receives little attention in the most recent reference works. Our bibliographic research has unearthed but two studies in which the subject is considered. These are the general papers by Kuhnt and Wochenin on alterations in the retina in psychoses, and the work by Blin on the ocular changes in dementia præcox. Kuhnt and

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* Read before the New York Psychiatrical Society, November, 1907.

Wochenin[1] examined 511 cases of mental diseases with the ophthalmoscope. Of these there were 5 cases of hebephrenia. The other forms of dementia præcox are not mentioned. Pathologic changes in but one case are mentioned, presumably the others were not noteworthy. This one patient had pallor or anemia of the temporal half of the papilla.

The work of Blin is much more to the point. He examined the retina in 87 cases of dementia præcox. A second examination was frequently undertaken. Despite his extensive material, Blin appears to have made no careful analysis of the significance of the findings. Of the 87 cases some abnormality of the papillæ was found in 59. The material was divided into three groups. Nine cases (10.2 per cent.) showed constant hyperemia of the discs, and in 23 (36.8 per cent.) the congestion was transitory. Blin does not mention the condition of the blood vessels as to overfilling, tortuosity, etc., nor does he appear to have examined closely into the coincident eye symptoms necessary to establish an eye syndrome for dementia præcox. An anemia of the papillæ was constant in 7 cases (8 per cent.), and inconstant in 15 (25.3 per cent.). He uses the term intermittent in connection with the latter. There were 5 cases in which congestion alternated with anemia (5.74 per cent.).

Various points often mentioned in individual cases are not summed up, such as haziness of the border, or the absence of demarcation between papillæ and retina, predominance of lesion in one eye and the like. Doubtless all these facts seemed somewhat contradictory and did not lend themselves easily to a summary.

Three years ago we undertook an independent research[2] on the significance of the ocular signs and symptoms in dementia præcox. We have analyzed 115 consecutive cases. The work was undertaken with the view that a careful analysis of the eye symptoms in dementia præcox might throw some definite light on the uncertain and perplexing pathogenesis of the disorder. In this respect, we believe we have not been disappointed, inasmuch as we have found definite changes and symptoms in all cases which are fully distinctive of this psychosis.

The fundus changes as seen clinically may be divided into three groups, which are usually in the order of their occurrence, as follows:

1. Congestion of discs; hyperemia and edema; dilated, dark colored veins; slightly contracted arteries and blurring of the edges of the discs, all varying in degree. These changes constitute a low grade of perineuritis of the optic nerve.

2. Congestion of the nasal side, with temporal pallor of discs, dilated veins, contracted arteries.

3. Pallor of discs, dilated veins, contracted arteries. These changes constitute anemia and partial atrophy of the optic nerve.

One hundred and nine cases were examined with the ophthalmoscope; 55 were males and 54 females. The ages of the males were from 12 to 47 years, and those of the females were from 13 to 39 years.

All the different forms of dementia præcox were under study. While the results by form-types have not been fully analyzed, we are prepared to say that the more marked changes in the eye syndrome were found in the more rapidly deteriorating types of dementia præcox.

The cases embrace those who have used alcohol and tobacco moderately or to excess, as well as abstainers. It is possible that alcohol and tobacco have contributed toward the clinical picture in some cases. In differentiating the pathologic condition of the optic nerve in tobacco and alcohol users from those in cases of dementia præcox, one observes central scotoma in the former. The one case showing a central scotoma for red in dementia præcox gave a history of alcohol and tobacco excesses. The disc changes in dementia præcox have some resemblance to those seen in the toxic amblyopia of tobacco and alcohol. But the fundus changes above detailed are seen in all cases under study. There is strong evidence that some other potent toxin is responsible for the disc changes in dementia præcox. We do not hesitate to say that we believe the toxin is primarily a vascular poison. Its most probable source is in the autointoxication (intestinal putrefaction is almost invariably evident from clinical symptoms) from the intestines or from the liver. It is possible that a faulty metabolism from a perverted action of some of the ductless glands (thyroid especially) may be the pathogenic agent. The primary departure from the normal in the disc is in the veins. They become dilated, tortuous and darker than normal. Edema of the disc appears shortly afterward. These changes are analogous to those seen in the passive congestion of the face and hands in dementia præcox cases. All these edemas produce such lasting disturbance in the nutrition of the optic nerve that slow degeneration of the nerve fibers finally results. Thus, of the 109 cases examined by the ophthalmoscope, a low grade perineuritis was found 62 times in the right eye and 67 times in the left. Temporal pallor, with nasal side congested, was found in the right eye 10 times, in the left eye 11 times. Pallor of discs was found in the right eye in 37 cases and in the left eye in 31 cases.

Inasmuch as the disc changes in the first stages resemble somewhat those seen in ordinary intestinal toxemia, we have repeatedly examined the discs in a number of cases while the patients were under active hygienic treatment of free catharsis, intestinal antiseptics, baths and dietetic regulations. A marked degree of betterment was noticed of the congestive margins of the discs, but the central edema and transitional pallor have continued. Indeed, while patients were under this treatment a general physical improvement was noticed, but the mental state seemed little improved.

Coincident with the study of the changes in the papillæ, the pupils were examined in 85 cases. The changes uniformly found here were not less significant. The examinations were made in moderately light rooms with the eyes fixing a distant object. The size of the pupils varied from 3 1/2 mm. to 7 mm., with an average of 4 77/85 mm., while the average of the control pupils (physician and attendants) was 3 68/85. An average enlargement of 1 9/85 mm. for dementia præcox over the normal was evident.

The light reaction was active in 71 cases and sluggish in 14. Consensual reaction was active in 68 cases and sluggish in 17 cases.

Accommodation and convergence were active in 71 cases and sluggish in 13. Hippus was present in one case.

The sensory pupillary reflex was slightly positive in 6 cases and negative in 79 instances. The psychic reflex

1. Ueber Veränderungen der Netzhaut bei Geisteskrankheiten, Ztschr. f. Augenh., 1903, xiii, 89.

2. This work was undertaken at the suggestion of Dr. Clark and the greater part of the work was carried out in his service at the Manhattan State Hospital and at the Vanderbilt Clinic (Dr. Starr's service). Dr. Tyson made the eye examinations and is responsible for the detailed findings of the same. Both authors are jointly responsible for the interpretative significance of the study.

was slightly positive in 4 cases and negative in 85 cases. Piltz-Westphal reflex was positive in 2[3] and negative in 85 cases.

Great care was exercised in measuring the pupils on account of the tendency of the eyes to change their visual lines. One is apt to complicate the accommodation and convergence reflex with the other tests. The negative reactions of the pupil appear to be due (1) to loss or partial loss of function through defective nerve innervation; (2) defect in attention; (3) diminished apperception.

Corneal sensibility was diminished in 69 cases and present in 17.

The visual color fields were examined in 81 cases. All were found concentrically contracted. The largest field was 30 degrees. The smallest 0 degrees. The fields were practically abolished. The average of the 81 cases was 10.6 degrees, which was a marked contraction from the normal. This may be explained partially by the inattention of those patients, diminished capacity for externalization and finally, and not least, by the edema and congestion of the optic nerve (perineuritis) in the first stage of degeneration of the nerve and by the ultimate shrinkage of the new connective tissue in the partial atrophy of the nerve.

The changes in the discs, pupils, visual fields and corneal sensibility which, when taken together, constitute the new syndrome, are all in accord with each other. In our examination of all other types of insanity, imbecility or idiocy we have found no other condition similar to what we have outlined here for dementia præcox.

The clinical significance of these findings is of importance:

1. They indicate that dementia præcox is attended by such an early and constant syndrome of alteration and disc, visual field, pupil and corneal sensibility as to materially aid in diagnosticating this psychosis. Consideration of the syndrome will particularly aid in the differential diagnosis of dementia præcox from the manic-depressive group, acquired neurasthenia, hysteria and the various forms of imbecility and constitutional inferiority.

2. The syndrome is a distinct contribution to the theory that dementia præcox is an autotoxic disease, and that the poison is primarily vascular, which finally induces neuronic degeneration. It points to a toxin of some sort, which is either a metabolic defect in the tissues (ductless gland defect) or, what seems more probable, that the poison is generated in the liver or in the gastrointestinal tract itself.

3. The syndrome is of prognostic value, as the severer grades of eye changes are found in the more rapidly deteriorating cases.

4. Finally, the optic nerve lesion is quite in accord with our best knowledge of the pathologic anatomy of dementia præcox, in other tracts of the brain (than the optic nerve which itself may be counted an analogue). The early vascular changes in the brain ought to receive more serious investigation.

We desire to thank Dr. Mabon and his staff, Dr. Smith of Central Islip and his staff, and the staff of assistants in the neurologic department of the Vanderbilt Clinic (Dr. Starr's service), and Dr. C. E. Atwood in particular, for the courtesies extended to us in placing their patients at our command.

3. At first positive, later examination was negative.

Special Article

THE AMERICAN ASSOCIATION OF MEDICAL MILK COMMISSIONS.

OTTO P. GEIER, M.D.

CINCINNATI.

It was while demonstrating the impure and dangerous milk supply of Cincinnati, before the Academy of Medicine, that Dr. W. H. Crane died suddenly on May 7, 1906. A vigorous, keen, intellectual, broad-minded physician, filled with the love of humanity, passing out in this tragic way, left a deep impression on the medical fraternity of Cincinnati. One month later the formation of a milk commission was proposed and a commission was appointed. Two personal friends of Dr. Crane took their places on this commission, and whatever they may have been able to accomplish in this work along with their associates, is but a reflection of his unselfish devotion to this cause.

In August, 1906, "certified" milk appeared in the Cincinnati market. Some few months later "inspected" milk, then "inspected bulk" for hospitals, and the further history of this commission differs little from that of earlier commissions. The Cincinnati commission placed a clinical and a household milk in the market, educated themselves as well as the physicians of their city on this topic, and used their influence to raise the standard and quality of the general supply.

A few months after the organization of this commission it addressed a series of twenty-five questions, covering every pnase of milk commission activity, to the twelve commissions then known. An exhaustive tabulation of these replies formed part of a report to the Cincinnati Academy of Medicine in November, 1906. It showed that there was considerable diversity in supervision, in working methods, in bacteriologic and chemical standards, etc.

An invitation to hold a conference was issued Feb. 25, 1907, by the Cincinnati commission. An enthusiastic response was received from most of the commissions. From that time things moved quickly. A temporary organization was formulated, which mapped out a program and decided that the meeting should be held at Atlantic City, June 3, 1907, one day previous to the meeting of the American Medical Association. One hundred and twenty-five delegates were present. Members of commissions from New York to Oakland, California, elbowed with scientists and hygienists who had been devoting themselves to some particular phase of the pure milk crusade. Twelve commissions reported their methods and results. Dr. Coit, the originator of the medical milk commission idea, traced its early history and development, while other papers were presented on the more general topic.

A permanent organization known as the American Association of Medical Milk Commissions was formed. A president, secretary and treasurer and a council consisting of five members were elected. The executive officers are to be elected each year, while the members of the council were elected for one, two, three, four and five years, respectively, so that one member of the council will be elected at each annual meeting. Committees were appointed on (1) medical examination of employés, (2) chemical standards, (3) bacteriologic standards, (4) veterinary inspections, (5) protection against tuberculosis.

One clause in the constitution of this association gives the keynote of its life: "The purpose of this association shall be to federate and to bring into one compact association the medical milk commissions of the United States; to exchange views and to adopt uniform methods of procedure in the work of medical milk commissions; to fix chemical and bacteriologic standards; to determine the scope of veterinary inspections, and to foster and to encourage the establishment of medical milk commissions in other cities."

The conference agreed that a crusade for pure milk in any section could be best advanced by the establishment of a medical milk commission appointed by the county medical society.

It was likewise determined that the secretary should edit

and have printed for distribution the proceedings of the annual meetings. The next annual meeting is to be held in Chicago, Monday, June 1, 1908, one day previous to the session of the American Medical Association.

At the time of the first conference we had knowledge of twenty-two commissions. The secretary of the association has been in correspondence since June, 1907, with fourteen other cities, which have organized or which are contemplating the formation of medical milk commissions. This has brought with it the writing of several hundred letters along with the distribution of such printed matter as the secretary had at his command, and which would assist in the proper conduction of this work.

Out of this experience has come the realization of the present limitations of this association, as well as its tremendous possibilities under more favorable circumstances. One can not conceive of any organization capable of doing more good than this had it sufficient funds to print and distribute a concise, working manual covering every phase of milk commission activity, as well as to do the heavy clerical work and correspondence that naturally follows the request for information from all quarters.

The American Association of Medical Milk Commissions should be in position to put into the field a representative who would visit one county medical society after another in our larger cities, giving a stereopticon lecture on this subject. The address should be held under the auspices of the county medical society, which would invite representative business men and charitably inclined citizens. The demonstration should cover bacterial and chemical analyses of their own milk supply and that of hospitals and institutions. Pictures of their best and worst dairies should be thrown on the screen. All facts bearing on the urgent necessity for an intelligent and concerted study of the local milk supply by a disinterested, unselfish set of men organized into a medical milk commission would be advanced.

At such meetings funds should be raised with which to begin the work. The literature and the working manual of the association could be distributed and a broad interest created as well as a demand for a clean milk supply.

Once established, each milk commission would become a potent factor in the community, not only in the supervision of a limited supply of clinical milk such as "certified," but its activity and study of the milk problem would stimulate the efforts of the local boards of health and naturally affect and eventually raise the quality of the total supply of those cities. Dr. Goler shows a lowering mortality in children under 5 from 33 to 15 per cent. by such a crusade in Rochester, N. Y. The general mortality of civilized communities has been steadily lowered, while the mortality of infants under 1 year has remained about the same. Gastrointestinal diseases, the largest single factor of infant mortality, are due chiefly to improper feeding and cause an enormous loss of potential wealth to the nation.

Mr. Nathan Strauss has had his name heralded from coast to coast as a benefactor of mankind for the "heated milk" supplied to New York City's poor. Stripped of all overestimation, his pasteurization merely kills a certain percentage of the bacteria in a dirty milk, possibly leaving the toxins that have already been elaborated by their growth. This method tends likewise to create a false sense of security as to the keeping qualities of milk, while it actually lowers the germicidal power of milk. "Pure milk is better than purified milk."

It is not the purpose of this paper to minimize or depreciate Mr. Strauss' noble charity, but rather to hold in contrast the efforts and the far-reaching results obtainable in medical milk commission work. Mr. Strauss works with a product from an unknown source and of unknown quality. The medical milk commission starts out at the dairy with healthy cattle, free from tuberculosis. It insists on modern sanitary rules throughout the process of milking. It cools the milk, bottles it in a clean state (practically free from bacteria), and retards the increase of bacteria by keeping the milk cold until delivery to the consumer. In other words, the milk commission stands for clean, cold milk secured from healthy cattle, free from pathogenic bacteria, and prompt delivery. That does not seem like an unreasonable demand, yet few cities comparatively can claim such a product.

Mr. Strauss' philanthropy ends with the delivery, after pasteurization, of a definite amount of milk which a certain amount of money will buy. Any money given toward the furtherance of the milk commission idea, through the American Association of Medical Milk Commissions, will be the means of starting hundreds of centers of philanthropy in as many cities. Such charity would become national in scope and increase a thousandfold.

This is not a tale of an Aladdin's lamp. The history of any well-organized medical milk commission is that of careful study of the local milk problem by the leading physicians of a community. One or more model dairies are soon established. A demand for their product is created by educating the physicians of that community to the value of such a clean supply. The laity begin to demand milk of a better quality and are educated to pay a higher price for the same. The demand for any articles soon creates a supply, and dairymen try to produce the quality of milk for which there is a demand, especially since it is sold at a premium.

Philanthropy usually steps in at this point and supplies this clean, safe milk to the babies of the poor through milk dispensaries. With the publicity that naturally follows, there comes the demand that the local health board improve the general supply and through these many links in the chain the masses are finally reached.

All over this great land men of large means and generous hearts are seeking some avenue of well-doing. If they knew the tremendous possibilities for good that lie in this work; if they could see how far-reaching their philanthropy could be made through the establishment of hundreds of medical milk commissions in as many cities; if they could appreciate how quickly these results would become national in extent and help solve the most serious economic and social problems of all people in all lands; then this association would be embarrassed by the riches that would flow in to do this work. And what better trusteeship for such a fund than the American Association of Medical Milk Commissions, including in its membership the leading physicians and hygienists of the country, who have given their best thought to the solution of this very vital subject of pure milk, and all born of unselfish devotion and a broad humanity?

Clinical Notes

UNEXPECTED AURAL EFFECTS OF SOME COMMON DRUGS.

GEORGE B. McAULIFFE, M.D.
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AURAL IODISM FROM POTASSIUM IODID.

History.—Dr. G., aged 29, was seen by me June 12, 1904. He had contracted syphilis a year before that date. He had noticed only a papular eruption and was under the influence of mercurials. Six weeks before his visit to me he began to take potassium iodid (gr. x, t.i.d.). After five or six doses, he manifested a slight iodism of the upper respiratory tract. His hearing was normal in the evening of the second day of the administration of the iodid. On rising, the next morning, he found he was deaf on the left side. Besides some hissing tinnitus, he had no other aural symptoms.

Examination.—It was found that the drum head was retracted and that the tuning forks were all heard by bone but not by air conduction. The acoumeter was not heard. He had stopped the iodid of potassium and received hypodermatic injections of salicylate of mercury (gr. i) once a week.

Subsequent History.—Aural tests a month later showed air conduction of the lower three forks of the Hartmann set. Bone conduction equal to bone conduction of the other ear. The acoumeter was heard at 4 inches. On December 4 all forks were heard except C^4. Bone conduction was greater than air

conduction, and the acoumeter was heard at 5 inches. Since then he has shown no advance and has discontinued treatment, which consisted in the main of catheterization and probe massage of the short process of the hammer.

The *Index Medicus* furnishes one case of iodism of the middle ear. It was published in an East Indian journal. The aural symptoms followed small doses of the drug and consisted of conduction deafness. The tympanum was filled with exudate and incision of the drum head resulted in a gradual recovery which, unlike my case, was perfect. The defective resolution in the case I report has, no doubt, resulted from the organization of an exudate in the fossula ovalis—a point of selection which is prognostically unfortunate and not uncommon.

This case, rare as it may be, should sound a warning against the reckless administration of iodid of potash. While its benefits elsewhere may not be decried, it is too often prescribed in aural disease from an *ipse dixit* reason rather than from the results of personal experience. I confess to very little gain from its use in aural affections. The tertiary manifestations of syphilis are more apt to come under our aspect and iodid of potash is prescribed because it is *secundum artem*. The discouraging results of its administration should make us all the more careful, since an idiosyncrasy on the part of the patient is hard to predetermine. The history of iodism shows us that the untoward effects are more apt to appear in nephritics and in the two extremes of age, and the size of the provocative dose is generally small. Finger has pointed out that, experimentally, potassium iodid produces dilatation of the cerebral vessels with retardation of the circulation, and it should be given carefully, therefore, in intracranial lesions. Paralysis and retinal hemorrhage have followed its use.

RHEUMATIC (?) OTALGIA—SALICYLATE OF SODA. EAR.

History.—A young woman, aged 17, was referred to me on account of a pain in the right ear. The pain was not constant, but was occasionally severe. It seemed to be more often present toward night. At the same time she complained of pain in the metatarso-phalangeal joint of the big toe. On examination, the pain was referred to the interior of the ear and did not radiate. The canal, drum, temporomaxillary joint and audition were normal. The teeth had been examined by a good dentist. The family practitioner prescribed salicylate of soda for the joint affection, which disappeared with the aural pain after a few days.

The connection of the two pains is purely conjectural, yet the case admits of a speculative opinion as to the value of salicylate of soda in aural pain in persons of the rheumatic dyscrasia. The action of salicylate of soda in deep-seated affections of the eye is a fitting analogue. Whether it is simply by reason of its action on the circulation or by its specific power, further experience may demonstrate.

ERGOT IN AURAL FIBROSIS.

History.—Mr. E., aged 36, a musician, presented himself on March 17, 1906, with the following history: During the previous summer, while abroad, he contracted pleurisy. He recovered very slowly, and began to suffer from a chronic nasopharyngitis. His hearing, very acute and trained by his musical profession, began to depreciate rather suddenly in the right ear; the left was unimpaired. He was much annoyed by a diplacusis. He immediately consulted a prominent aurist, who diagnosed his trouble as tubal stenosis. He received every possible form of treatment, catheterization, massage, bougieing, etc. The nasal stenosis was relieved, but his ear did not show any improvement in function.

Examination.—When I examined him both drumheads showed marked retraction. The right was decidedly sclerotic. He heard the acoumeter on the right side at 3 inches. There was some mucus in the right tube. Inflation did not augment the hearing. The tuning forks were not heard by air conduction. All except C^4 were heard by bone conduction.

Treatment and Subsequent History.—On April 11, the tube was patent and free. The reaction to the forks was practically the same. The acoumeter was heard up to 4 inches. He was taught to catheterize his ear and on account of the catarrhal condition, which persisted, he was advised to go to the mountains of North Carolina. He came back with the ear trouble unchanged, but with his catarrh and general condition somewhat better. Shortly after his return he began to have symptoms in the left ear similar to the initial symptoms of the attack in the right ear. The tube became somewhat stenosed. He lost the power of differentiating low-pitched instruments and the hearing in the left ear became less acute. He felt the similarity of the two attacks and became very much depressed. He received nasopharyngeal treatment and inflation, but the ear was not in such good condition as before. Feeling that his fear of deafness despite treatment was perhaps well founded, and that perhaps some constitutional cause was in operation, I referred him to Dr. Heinrich Stern for examination. Dr. Stern found nothing organically wrong, but thought that the local condition was a vasomotor disturbance back of the fibrosis, not manifested generally as yet. After careful examination, it seemed best to Dr. Stern to put the patient on ergot. The man had very little local treatment after this, but came to me from time to time for tests. He recovered entirely from the tubal catarrh and nasopharyngitis, and on his last visit showed a normal left ear. The right ear had not materially changed, and he still kept up catheterization of that ear. It is rather premature to predict any benefit from ergot in this type of fibrosis of the ear, but the results of some trials justify the hope that the drug may have some effect in the arrest of the progressive deterioration of sclerosis.

A CASE OF BRAIN ABSCESS SHOWING THE PNEUMOCOCCUS.*

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In THE JOURNAL of the American Medical Association for Jan. 6, 1906, Drs. E. E. Southard and C. W. Keene reported a series of "twelve cases of human brain infection with the pneumococcus, together with the results of inoculation of the pneumococcus in the brains of guinea-pigs." The following is a report of another similar case, showing some points of especial interest, with an abstract of previously reported cases of pneumococcic cerebral infection collected from the literature.

Drs. G. L. Walton and G. K. Sabine have kindly furnished clinical notes on the case. Dr. P A. Lewis made the bacteriologic cultures. The autopsy was done by Dr. E. E. Southard.

History.—Patient was an unmarried woman, 35 years old. Had had measles, scarlet fever and whooping cough in childhood. On Feb. 5, 1905, after riding in a trolley car, patient noticed a tingling in the right foot, followed by numbness extending to the entire right side, headache and gradual onset of right-sided motor paralysis, with dragging of the toe and difficulty in using the pen, slight aphasia and dulness of intellect. There was gradual improvement until March 5, 1905, when headache returned with aphasia, slight stiffness of the neck and temperature of 101 F., pulse of 70. At this time patient was seen in consultation by Dr. F. C. Shattuck, whose examination was negative otherwise than as concerned the paralysis. Her condition grew worse, with occasional vomiting and moderate leucocytosis. Seen in consultation by Dr.

* From the Pathological Laboratory of the Harvard University Medical School.

G. L. Walton on March 12, 1905, she had a normal fundus and no hemianopsia. She had rigidity of the neck, none of the back, and a suggestion of Kernig's sign on both sides. She talked freely and in a rambling manner, suggesting a low form of delirium. She showed paraphasia and could not name the days of the week or months of the year. She grew steadily worse and died April 11, 1905, with moderately high temperature toward the end.

Clinical Summary.—Gradual onset of right-sided sensory and motor disturbance, with headache, slight aphasia and mental dulness. Slow course of disease with very marked remissions. After four weeks, onset of meningeal symptoms, with vomiting, fever and leucocytosis, progressing to death nine weeks and two days after first attack.

Anatomic Findings.—Fairly developed, poorly nourished woman with dark hair. Extremities rigid. Postmortem lividity of dependent parts. No edema. The walls and fluid of the peritoneal cavity were normal. Appendix normal and the mesenteric lymph nodes normal. The pleural cavities were normal, except for slight, easily separable bands at the apices. In the pericardial cavity were found several hundred c.c. of clear fluid without fibrin. The auricular cavities of the heart were distended witl. cruor clot. Heart walls, endocardium, valves, and coronary arteries normal. Both apices of the lungs, behind and below, showed small areas, less than 1.5 cm. square, of yellowish-brown fibrosis without caseation. Lung substance in general normal. Lower lobes behind were blood-filled and here and there showed ill-defined areas of lighter color and increased consistence. The bronchi were clear and the bronchial lymph nodes normal. The capsule of the spleen was fairly tense, the substance a trifle pulpy, the Malpighian bodies distinct and the trabeculæ normal. In the gastroenteric tract no lesion was found. The liver border was sharp and its consistence normal. Its color was slightly yellower than normal. The gall bladder and pancreas were normal. The kidneys stripped well, their blood content was high and substance normal. The ureters were normal. The adrenals showed central brown softening (postmortem). The aorta was normal.

The scalp and cranium were normal. Dural sinuses contained cruor clot. The dura was tense and the dural veins full. The arachnoidal villi were moderately developed. Subdural space was almost dry. The pia mater was congested, more over left hemisphere than over right. Convolutions were flattened, slightly more on right side. The basal pia mater was filled with slightly viscid, greenish, serous pus, which ran up along the Sylvian vessels a few centimeters. The under surfaces of the pons and medulla were bathed in pus. The velum interpositum and especially the sheath of the left anterior chorioidal artery were soaked in pus. The pituitary body was soft. There was no great amount of exudate about the optic nerves. On section the brain substance was everywhere moist and fairly firm. Puncta cruenta distinct. Both ventricles contained pus in the posterior cornua. The ependyma was moist and over the lenticular nuclei of a salt-sprinkled appearance. The right ventricle contained more pus than the left. On section of the ganglia an abscess, 2 cm. in average diameter, was found in the left optic thalamus, communicating with the body of the lateral ventricle, but not with the third ventricle. The cavity was filled with pus similar to the pus in the basal cisternæ. The wall of the abscess was irregular and injected. There was a zone of reaction about it, 2 or 3 mm. in diamter, of a firm, opaque, pinkish-gray, injected tissue. The middle-ear cavities were both clean.

Anatomic Diagnosis.—Abscess of left optic thalamus and wall of lateral ventricle. Pyocephalus and ependymitis. Basal leptomeningitis. Early bronchopneumonia. Healed tuberculosis of apices.

Bacteriologic Finding.—Pneumococci were recovered from the abscess, but died on the first subculture.

Anatomic Summary.—A pneumococcic abscess of the left optic thalamus, with secondary pyocephalus, ependymitis, basal leptomeningitis and bronchopneumonia. Source and port of entry of infection not discoverable.

Microscopic Findings.—There were slight chronic interstitial myocarditis, slight arteriosclerosis of spleen and pancreas, moderate fatty infiltration of the liver, and in the kidneys slight general increase of interstitial connective tissue and cloudy swelling of the tubular epithelium. The lung showed focal areas of pneumonic consolidation, the exudate contained little fibrin, but consisted chiefly of polymorphonuclear neutrophiles, with a few large mononuclear basophiles and an occasional red blood corpuscle and large phagocytic cell. Within the latter, and scattered here and there in the exudate, were a few lanceolate diplococci. There were also large masses of staphylococci. The cerebral meninges were somewhat thickened and edematous, with some increase of connective tissue, but without exudate. They were, however, slightly infiltrated with polymorphonuclear and lymphoid cells. The subpial layer of neuroglia was neither wider nor denser than normal. The cortex showed slight edema and a few wandering polymorphonuclear and large mononuclear leucocytes. The subcortical tissues showed considerable general and perivascular infiltration with plasma and lymphoid cells and foci of more marked infiltration in which a differential count of the white cells showed the proportion: Lymphocytes, 66 per cent.; plasma cells, 20 per cent.; polymorphonuclear neutrophiles, 10 per cent.; large mononuclear cells, 4 per cent. There was also a considerable increase of connective tissue through this region, both interstitially and about the blood vessels. Gram-staining, capsulated, lanceolate diplococci were to be found freely in the infiltrated areas. The walls of the lateral ventricles showed slight general edema. There was scattering infiltration of the tissues with wandering individual leucocytes, and here and there, especially in the perivascular spaces, large areas and smaller foci of cellular aggregation, which gave average differential counts of lymphocytes 40 per cent., plasma cells 36 per cent., polymorphonuclear neutrophiles 20 per cent., large mononuclear cells 4 per cent. Among these cells were observed many lanceolate diplococci. There was considerable thickening of the subependymal layer of neuroglia. The ependymal cells appeared normal, but an occasional leucocyte could be seen pushing its way between them toward the ventricular lumen. In the ventricular cavity was a richly cellular exudate composed of polymorphonuclear neutrophiles 75 per cent., lymphocytes 15 per cent., large mononuclear cells 10 per cent.

The abscess was surrounded by a fairly thick and definite wall of fibrous connective tissue. In the adjacent areas there was diffuse cellular infiltration, particularly in the adventitia of the larger arteries, giving a differential count of lymphocytes 63 per cent., plasma cells 30 per cent., polymorphonuclear neutrophiles 5 per cent., phagocytes 2 per cent. Lanceolate diplococci were seen everywhere. The contents of the abscess consisted of necrotic material, pneumococci, and cells, the latter in the proportions of polymorphonuclear neutrophiles 65 per cent., lymphocytes 30 per cent., large mononuclear leucocytes 5 per cent.

The chorioid plexus showed granular coagulum and leucocytes caught in the villi. Lining cells were occasionally swollen, as a rule normal and supplied with large vacuoles. The perivascular tissues showed great numbers of plasma cells, some with two nuclei. In the same locus were cells with basophilic cytoplasm caught in mitosis. The cerebellum was normal in every respect.

In the medulla, the meninges were overlaid by an exudate consisting of considerable fibrin, with cells in the percentages, lymphocytes 83 per cent., large mononuclear cells 15 per cent., polymorphonuclear neutrophiles 2 per cent. The meningeal vessels were densely surrounded by similar cell aggregations. The spinal accessory nerves were not invaded by leucocytes. There was no neuroglial hyperplasia. There was slight sclerosis of the meningeal arteries. Pneumococci were present in them and in the exudate. The adjacent tissues of the medulla were but slightly infiltrated. In the olivary nuclei were many large ganglionic cells, some showing the axonal reaction.

In the cervical cord, the meninges were much thickened, with an exudate composed of lymphocytes 60 per cent., plasma cells 12 per cent., large mononuclear leucocytes 20 per cent., and polymorphonuclear neutrophiles 8 per cent., with very little fibrin. There was comparatively little increase of connective tissue, and little infiltration of the cord except in an

area immediately surrounding the central canal, where there was also considerable increase in thickness and density of neuroglia. The ependyma was normal. There were no changes in the motor cells of the anterior horns.

Microscopic Summary.—Slight arteriosclerosis. General perivascular lymphocytic infiltration of nerve tissue. Walled-off abscess with contents of the usual cellular composition.

GENERAL SUMMARY AND REMARKS.

The case was characterized by cerebral symptoms and signs from the outset, subacute for the first four weeks, then increasingly acute till death after a total duration of nine weeks and two days. The points of especial interest in connection with it are two: First, the cellular proportions in the meningeal exudate and in the perivascular and general infiltration; second, the absence of determinable source or port of entry for the infection.

As is shown by the figures in the foregoing paragraphs, there was a marked predominance of lymphocytes and plasma cells in the infiltration of cortical tissue and ventricular walls and in the meningeal exudate, whereas in the abscess cavity, in the ventricular lumen, and in the pulmonary exudate, polymorphonuclear leucocytes prevailed. In this respect this case resembles numbers 1, 4, 7 and 16 in the series of Drs. Southard and Keene described in the article referred to above, but the preponderance of mononuclear forms was much greater than in any of them. There was distinct subpial and subependymal gliosis. Lanceolate diplococci were found freely in all the affected tissues, showing a generalized infection.

In each case of the Southard-Keene series some source for the infection is determinable: otitis media, trauma, acute or chronic pulmonary conditions, septicemia. In this case no such source could be found. The onset of symptoms was gradual, there was no antecedent injury or infection elsewhere. The pneumonic process in the lung was evidently terminal and secondary to the brain infection, which must be concluded to have been primary and coming either from the general blood stream or possibly through the nose.

With a view to comparing this case with others, and for the sake of completeness, I have attempted to collect from the literature all previously reported cases of pneumococcic cerebral abscess.

After careful and thorough search I have found reported only eight cases of cerebral abscess, in which the presence of the pneumococcus of Fränkel in the pus from the brain was demonstrated by bacteriologic examination. I have thrown out a number of cases of cerebral abscess following pneumonia, in which the presence of the diplococcus lanceolatus was not thus demonstrated but in some of which it doubtless was an etiologic factor in the production of the abscess. Following are the references and brief summaries of the eight cases in question:

1. MACEWEN:[1] An otitic cerebellar abscess of the left side, with a subdural abscess of large size situated above the tentorium, involving the posterior third of the two upper temporal convolutions, the angular gyrus, and a considerable portion of the adjacent occipital lobe. Both abscesses were opened and drained, with complete recovery. Pus from the subdural abscess contained pneumococci and staphylococci pyogenes aurei.

2. SAHLI:[2] An abscess of the occipital lobe, with hemiopia, following an influenza otitis. Pus from the abscess and from the ear showed Fränkel's pneumococcus. The patient died, a few weeks after operation, of purulent meningitis proceeding from a small secondary abscess near the almost healed original focus.

3. SIRON and JOSUÉ:[3] Multiple cerebral abscesses following influenza with bronchopneumonia. At the autopsy was found a subarachnoid abscess, communicating through the left temporal lobe with the ventricles, which were full of pus. There was also an abscess of the frontal lobe, one of the lenticular nucleus, one of each occipital lobe, and one of the lung. In all these the pneumococcus was found. The ears and sinuses were normal.

4. BOINET:[4] In this case there was onset of cerebral symptoms six weeks after recovery from influenza with bronchopneumonia. Death occurred five weeks later. At autopsy an abscess was found in the left temporal lobe, ruptured into the ventricle, with three subcortial diverticula. There was incipient meningitis. Pneumococci and streptococci were present in the pus. There had been destruction of the corpus striatum and part of the corona radiata. The middle ears were normal.

5. BOINET:[5] Five days after the sudden onset of cerebral and meningeal symptoms death occurred. At autopsy a purulent meningitis was found, especially at the base, and a small abscess in the corona radiata of the parietal lobe, pus from which contained pneumococci, staphylococci and streptococci. In the lungs there was hepatization at the base.

6. LANDRIEUX:[6] Death occurred on the fifth day from a lobar pneumonia, two days after the onset of cerebral symptoms with complete left hemiplegia. An abscess was found in the right hemisphere, occupying partly the lenticular nucleus, partly the anterior segment of the posterior arm of the internal capsule. It contained pneumococci in pure culture.

7. APERT and DELILLE:[7] After a fortnight's illness, there was sudden onset of meningeal symptoms, and death three days later. The patient, a girl of 14, had had bronchitis two years before, followed by a persistent cough. At autopsy was found dilatation of the bronchi, a pulmonary abscess, and multiple cerebral abscesses, one in the right prefrontal region, one in the left temporo-occipital, one in the left parietal lobe, and one in the right occipital lobe. All the abscesses contained pneumococci.

8. GRUENING:[8] A pneumococcus infection through the nose produced orbital cellulitis. At the first operation the orbit and the empyematous ethmoid cells and frontal sinus were drained. Cerebral symptoms ensued. A second operation exposed a large abscess of the frontal lobe, with a number of pockets, pus from which showed pneumococci. Pneumonia and pneumococcemia followed, with death in five days.

To these may be added the one case of the Southard-Keene series which showed an abscess.

9. SOUTHARD-KEENE:[9] Man of 25, with obscure history of previous head injury, had headache for four days and was unconscious two days. Death occurred six days later, ten days from onset of symptoms of meningitis. Autopsy showed cerebrospinal meningitis, with small focal abscess in the white matter opposite the left frontal cortex, encephalitis and pyocephalus. Cultures from heart's blood and brain gave pneumococcus.

These nine cases, then, with the one now reported, make a series of ten in which the pneumococcus is definitely determined as the infecting organism. Of these two (Cases 1 and 2) were secondary to otitis media, three (3, 4 and 6) to pneumonia, one (7) to chronic pulmonary condition, one (8) to nasal infection, one (9) to trauma, and two (5 and 10) to infection through undiscoverable sources. Case 5 was probably one of fulminating septicemia, leaving the present case (Case 10) as the only one of slow onset without demonstrable port

1. Pyogenic Infectious Diseases of the Brain and Spinal Cord, Glasgow, 1893.
2. Volkmann's Sammlung klinischen Vorträge, July, 1891, xxiii, p. 203.
3. Presse méd., 1895, p. 235.
4. Marseilles méd., xxxvii, p. 641.
5. Rev. de Méd., vol. xxi, p. 113.
6. Jour. des Practic., 1903, xvii, No. 9, p. 129.
7. Bull. de la Soc. anatom. de Paris, 1904, vi, p. 631.
8. Med. Record, lxv, p. 215.
9. THE JOURNAL A. M. A., 1906, xlvi, p. 16.

of entrance for the infection. In this respect, and in the relative proportions of the cells in the exudate and infiltration, it is believed to be unique.

Attention is especially drawn, moreover, to the occurrence of lymphocytes and plasma cells in the various nervous tissues. The occurrence of such cells has been made the basis of extravagant claims by several German writers of the virtual specificity of the plasma cells in the meninges and perivascular tissues in general paresis of the insane. Those who maintain the virtual specificity of the plasma cell in paretic tissue charily admit, of course, that luetic and tuberculous tissues likewise exhibit local collections of lymphocytes and plasma cells. The same cells occur in the present case of pneumococcic abscess.

A NEW INTRAGASTRIC ELECTRODE.

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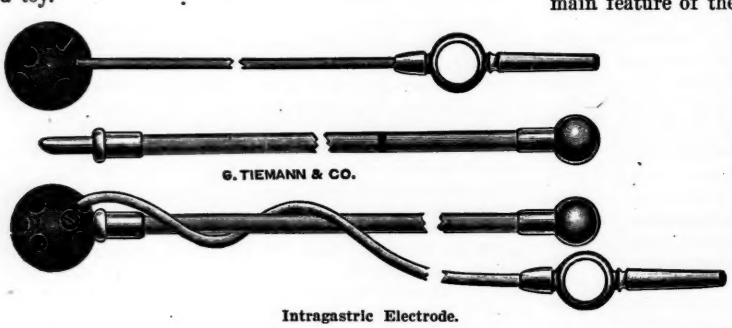
The electrode herein described, in addition to the essential features necessary in such an instrument, possesses the added advantages of being easily and quickly introduced into the stomach or esophagus, of being comfortably borne by the patient during the treatment, and is practical in its strength of construction rather than a toy.



Intragastric Electrode.

The intragastric electrodes now in use may be divided into two classes: those which have a narrow conducting cable (the Einhorn, and Ewald's and Lockwood's modification of it), and those which depend on a thick stiff tubing (like a stomach tube) around the wires to give the cable firmness so that the end piece can be easily pushed into the stomach (Boas', Stockton's and others). The first class comprises the best instruments for practical use, for the latter only magnify such objectionable features as may be found in most of the first group. The matter of irrigation during the time of the passage of the constant currents (possible in some of the electrodes of the second class) is not of much practical value in intragastric work, excepting in a few isolated instances.

The main objection to the deglutable electrode of Einhorn is the fact that it must be swallowed for its introduction. This is often a discouraging performance to patients, is time consuming and is not devoid of dangers to the physician (infections and abrasions from the teeth incident to placing the olive far back into the mouth of the patient). I have had patients who could not swallow or would vomit up the end piece even when the utmost care had been exercised in its introduction. Furthermore, as Lockwood has pointed out, the trailing string of this instrument is a disadvantage, although in my hands not so much of a one as the first mentioned. Therefore, the deglutable feature is a decided drawback rather than an advantage in the constant use of this otherwise good instrument.

When a stiff straight wire (Ewald) or a spiral one (Lockwood) has been incorporated in the cable the valuable migratory feature of the Einhorn electrode is done away with, and the instrument is rendered uncomfortable for the patient to bear in the pharynx during the course of a treatment sufficient in length of time to obtain results.

Another objectionable feature to the American made Einhorn electrode is the thinness of the insulated rubber tubing about the wire. In practice, this rubber is constantly breaking down from wear and tear of use and the teeth of the patient. This objection is minimized to a degree by the thicker tubing to the electrode here shown, a modification now carried into effect in the German makes of the deglutable electrode. This thicker cable makes no practical difference in the comfort to the patient.

This new electrode consists of two separate parts, the electrode proper and the introducer. The end capsule of the electrode (13 mm. in diameter) is a hard rubber perforated case inclosing a metal ball of steel in which the conducting cable is held. The introducer is the main feature of the instrument. It consists of a spiral wire covered with rubber tubing on which is marked the usual distance from the incisors to the stomach. At one end of the introducer is a stem, flattened on one side, which fits into the metal ball. The flat surface prevents the ball from turning when the instrument is assembled for use. On the off end of the introducer is a round metal ball of no significance.

TECHNIC OF INTRODUCTION.

The patient is first made to drink a tumblerful or more of water; this is essential as a conductor of the current from the metal ball in the end piece to the external electrode. The introducer is lubricated with glycerin, then the electrode (which has been immersed in water) is mounted by slipping the spherical end on to the stem of the introducer after which one turn of the cable is made around the end of the introducer shaft. The entire instrument is inserted into the patient in the same way as is a stomach tube. At the desired point in the esophagus, or better in the stomach, the electrode is freed by making one or two short in and out movement of the introducer, the cable being free from the hand. The introducer is then withdrawn, leaving the electrode within the patient. It is my custom at this time to have the patient take another swallow or two of water. Care must be taken not to have more than one turn of the cable about the end of the introducer, and it is advisable to free the cable from the hand after the capsule has been delivered below the laryngopharyngeal junction.

WITHDRAWAL OF THE INSTRUMENT.

At the end of the treatment the electrode is withdrawn in the same way as is the simple deglutable instrument; that is, the string is drawn on until the ball end is held at the back of the larynx, then with an effort

at swallowing (when the entroitus of the esophagus opens) the end of the instrument is delivered. I have used this electrode several hundred times with universal success and thus can recommend it as a most practical and satisfactory instrument.

228 East Nineteenth Street.

A CASE OF INTERMITTENT LIMPING WITH SUGGESTIONS AS TO TREATMENT.

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Under this and other names[1] various authors have described a disease rather rare in this country, but occurring much more frequently in Russia. It consists of an obliterating endarteritis, and often ends in gangrene. The two characteristics are: First, the absence of pulsation in the arteries of the affected limb; and, second, a peculiar lameness accompanied by pain and by a sense of constriction in the calves. This pain comes on when the patient has walked a short distance, and subsides when he comes to a stop.

The case here reported is interesting for several reasons, principally, however, as showing the curative powers of rest. The patient was seen while under treatment, without the knowledge of his regular attendant, by one of the most eminent consultants in New York, and was told that he would never walk on his foot again. He had already lost one foot, and therefore was willing to carry out the long and tedious treatment prescribed for him. Lovett, in his excellent article on this disease,[2] strongly advised rest as the one hope for recovery.

No examination was made of the foot that had been amputated, and little that is interesting can be learned of the patient's previous history from his former medical advisers, except the rather suggestive statement of one of them that "A. M. has lived a pretty swift life and has been a puzzle to all the doctors. The amount of albumin in his urine at times is shocking."

Patient.—A. M., aged 39 years, manager, married, and having two children, was first seen Aug. 6, 1906, complaining of intermittent limping.

History.—In 1897 he was examined for life insurance and albumin was found in the urine. In 1898, patient had what appeared to be rheumatism in the heel, followed by a similar condition in the forearms, both of which were swollen, red and sore. Symptoms yielded to anti-rheumatic remedies. He denies syphilis.

In 1899 a peculiar form of limping appeared, a sense of constriction and pain in both calves appearing when the patient had walked a short distance, and disappearing when he rested. This was followed by swelling and redness along the right leg and foot. The patient went to bed for six weeks, took large doses of bicarbonate of soda, lemon juice and iron, and gradually recovered. There was a slight recurrence of these symptoms in 1900 and in 1901, in both legs, but not severe enough to keep the patient from his business.

In June, 1902, an ulcer appeared under a corn on the fourth toe of the right foot, and refused to heal. One month later this ulcer was curetted. Then, on account of failure to heal, the toe was amputated. After this, for the same reason, there followed four more operations, the last in July, 1903—evidently, first, an amputation of the metatarsal; second, an amputation from the big toe across the foot, removing the four outer toes; third, skin grafting; fourth, an amputation of the lower third of leg. The wound then healed promptly.

In 1904 and 1905 there was a slight recurrence of the trouble in the left leg, which seemed to be held in check by antirheumatic remedies. There has been no trouble in the right lower extremity since the amputation. Patient wears an artificial foot.

In May, 1906, the patient began to experience pain in the left foot and leg. The symptoms increased and interfered with the carrying on of his business.

Examination and Treatment.—Aug. 6, 1906, there was a slight redness and thickening about the internal malleolus and inner side of foot, which was sensitive to pressure. The diagnosis made was lymphangitis. Treatment consisted of wet dressings of aluminum acetate.

The symptoms grew better, then recurred. Mercurial ointment was applied, and although the patient presented no signs of syphilis, and said that he had undergone a rather thorough anti-syphilitic treatment some years before, he was put on iodid of potassium, and later had five injections of salicylate of mercury. Stockinette bandages were applied to the leg. On one or two occasions the patient kept his bed for a week or two and then seemed to become markedly better.

Following the inflammatory swelling about the ankle came a similar condition along the inner border of the gastrocnemius, a painful, thickened, indurated cord—evidently a phlebitis. Later, this phlebitis spread up to the knee, and then could be traced along the inner side of the thigh to the saphenous opening.

A consultation in the latter part of October, with Dr. Clarke, established the absence of pulsation in the posterior tibial and in the dorsalis pedis arteries. Pulsation in the left radial artery was smaller than in the right. The arteries throughout the body were apparently normal. There was no sclerosis.

The patient was then put to bed and was not allowed to leave it on any pretext.

Nov. 15, 1906.—Femoral artery pulsates somewhat. Pulsations can be felt in artery just internal to front of tibia. This pulsation ceases at a point half way down the leg. The patient wears stockinette bandages. The terminal joint of his left forefinger is numb and cold.

Jan. 10, 1907.—The patient has been in bed since last note. Inflammatory symptoms have disappeared. Will now go about apartment in wheeled chair.

January 22.—Leg in fairly good condition; circulation fair.

January 24.—Slight trace of albumin in morning urine. Albuminous food cut down.

February 10.—The patient walks about apartment to a moderate extent. The lower half of the leg and the foot are cold.

Jan. 1, 1908.—The patient remained in his apartment during the entire winter. As soon as all acute symptoms had disappeared, massage was begun, and for several months was continued. It was later replaced by vibratory massage. With the advent of warmer weather he began to go about, and gradually resumed his accustomed manner of life, continuing however, the vibratory massage. He was instructed to avoid injury and exposure to cold.

February 13.—The leg is in better condition than it has ever been since first observation. Circulation is good in the toes; there is slight coldness of the foot. Pulsation can be felt as before half way down the leg, but no arterial pulsation can be felt below that point. Radials and temporals are normal. Patient says that he injured the skin on the back of his foot three months ago, but that the wound healed slowly. Vibration twice daily is being continued.

In spite of the improvement in the leg, the prognosis, if our ideas on the underlying pathologic process are correct, is very unfavorable. A wound is liable to put on the nutrition of the tissues a strain they are unable to bear, and the patient will lose this leg as he did the other.

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1. Intermittent claudication: dysbasia angiosclerotica, angina cruris; myasthenia paroxysmalis angiosclerotica, etc. The term intermittent claudication is misleading. The closure of the arteries is permanent, though the symptoms may intermit. Herein this disease appears to differ from Raynaud's disease and from erythromelalgia. Again, Raynaud's disease is found most often in the upper extremities.

2. Jour. Am. Orthop. Assn., 1906.

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[For other information see second page following reading matter.]

SATURDAY, MAY 2, 1908.

HARKING BACK TO FORMER CHICAGO SESSIONS.

The coming session of the American Medical Association will be the fourth held in Chicago, the previous ones being in 1863, 1877 and 1887.

1863.

The general meetings of the 1863 session were held in Bryan Hall, on Clark Street, between Randolph and Washington, opposite the County Court House and about where the Grand Opera House now stands. Dr. Wilson Jewell of Pennsylvania was the acting president, Dr. Eli Ives of Connecticut, elected president in 1860, having died during the intervening years. Dr. S. G. Hubbard of Connecticut and Dr. Hosmer A. Johnson of Illinois were the secretaries. The opening prayer was by Rev. Robert L. Collier, then pastor of Unity Church and one of the most influential men of his day. Dr. N. S. Davis, as chairman of the Committee on Arrangements, delivered an address of welcome in which he said that the usual notices for the regular meeting for 1861 had been issued early in that year and that preliminary arrangements for the meeting of the Association had been made when the excitement following the breaking out of the Civil War led to the postponement of the session to the first week in June, 1862. This date coming about the time of the battles of Fort Donelson and Shiloh, and the impossibility of a session of the Association being apparent, the meeting was again postponed until 1863.

The sections met in Bryan Hall, Bryan Hall No. 2 and in the Methodist Church Block. This location, at the corner of Clark and Washington, is still occupied by the First Methodist Church. Drs. N. S. Davis, Thomas Bevan, Edmund Andrews and H. W. Jones composed the Committee of Arrangements. Delegates to the number of 216 were present from eighteen states and the territory of Dakota. Dr. Jewell, the acting president, delivered an address on "Hygiene, the Science of Health." A number of committees reported on various subjects, the plan of procedure at that time being to refer scientific matters to special committees for investigation and report. A recent order of the Surgeon General of the United States Army, W. A. Hammond, prohibiting the use of calomel and antimony in the army, was discussed and a committee appointed to inquire into the reason for this order. A committee was also appointed to memorialize President Lincoln on the necessity for the organization of an ambulance system for the army. A number of papers were read, as well as reports of committees, but it is evident from the minutes that the minds of all present were on other things. References to military experiences, camp life and its diseases, etc., are frequent.

1877.

The twenty-eighth annual session was held in Chicago, June 5-8, 1877. A copy of the original program of this session states that the general and section meetings would be held in Farwell Hall, 148 Madison Street. Old residents of Chicago will remember this building, for years one of the centers of city life. The Association was called to order by the retiring president, Dr. J. Marion Sims of New York, who introduced the president-elect, Dr. Henry I. Bowditch of Massachusetts. The opening prayer was made by Bishop Harris of the Protestant Episcopal Church. Dr. N. S. Davis was again the chairman of the Committee on Arrangements. In welcoming the delegates he said: "Thirty-one years ago seventy-six gentlemen met in New York City to organize the Association. Two-thirds of the original members have passed away." The speaker said that he failed to recognize a single person in the meeting who was present on that occasion. At this moment a hand was raised and Dr. Davis recognized Dr. Washington L. Atlee of Philadelphia, the only other one of the original members present beside Dr. Davis. The roll call showed 660 present, representing thirty-five states. Dr. Bowditch, in his presidential address, discussed the work and the plan of organization of the Association. Much space was given to the discussion of the United States Pharmacopeia and the relation of the Association to it. The question of the organization of state boards of health was discussed and a resolution for transmission to the governors of the various states adopted, endorsing the establishment of such boards. Resolutions were adopted protesting against the Morrison tariff bill on account of the tax levied on quinin.

Dr. Bowditch further, in his address, made two suggestions which are interesting as outlining the developments of after years. The first was that, in order that every honorable physician in the United States might become a member of the Association, such changes should be made in the organization of county and state societies that membership in the county society would include and carry with it membership in the state society and that every member of the state society should become a member of the American Medical Association. His second recommendation was that the basis of representation (at that time one delegate for every ten members) be changed so as to make the representative body smaller to facilitate business. These changes, long needed for the growth of the Association and often advocated, were not adopted for thirty-one years, or until the reorganization in 1901

1887.

The third session of the Association held in Chicago convened at Central Music Hall, June 7, 1887, twenty-one years ago. This building, long a landmark in the downtown district, stood on the corner of State and Randolph and was torn down a few years ago to make room for the new building of Marshall Field and Company. The Association was called to order by Dr. Charles Gilman Smith, chairman of the Committee of Arrangements, and the opening prayer was made by Rev. Samuel P. McPherson, at that time pastor of the Second Presbyterian Church. Mayor Roche delivered the address of welcome. Dr. E. H. Gregory of St. Louis delivered the presidential address on the subject of "Cell Antagonism." The report of the trustees stated that THE JOURNAL was now in its fifth year and that the offices were located at 68 Wabash Avenue. The report showed the total weekly circulation to be 4,387, or a net increase of 116 subscribers during the year. An inventory of the property of the Association showed its value to be $1,058.56, on which an insurance of $800 was carried.

At this session Dr. N. S. Davis reported for the special committee on changes in the plan of organization which had been appointed at the previous session. Dr. Davis' report is noteworthy on account of the fact that the changes and improvements embodied in the present plan of organization were practically all included in his report, which was adopted but was later reconsidered and laid over until the next year, when discussion arose as to some of the details and for some reason the entire matter was laid on the table and lost sight of. It is also interesting to note that a communication from the American Pharmaceutical Association was received, requesting members of the Association to prescribe and use only official preparations or those having a published formula. Dr. A. Y. P. Garnett of Washington was elected president. The amount of business transacted at this session seems to have been small, much of the time being taken up with the report of the Rush Monument Committee and a discussion of ways and means for raising funds for this memorial, which was finally erected in 1904. THE JOURNAL for the following week states that this session was the "largest, most pleasant and most profitable in the history of the Association."

1908.

It is characteristic of the rapid growth of the city and the consequent changes that the meeting places of previous sessions exist to-day only as memories, two of the buildings having been demolished to make room for larger structures, and the third, Bryan Hall, having been burned in the fire of 1871. The meeting places of the Association at the coming session would have been considered far away from the business center in both 1877 and 1887, while in 1863 they would have been well-nigh on the outskirts of the city. While the membership of the Association has changed, as have the places of meetings, and while old faces have given place to new, yet the problems, work and duties of the Association and its members are much the same as in years gone by. Members of the Association will find a greater and busier city than they visited before, just as they will find an Association stronger, better organized, and better equipped to carry on the work for which it was founded.

INTESTINAL ANTISEPTICS.

Unsatisfactory as may be the clinical results produced by administration of antiseptics for the purpose of decreasing infection of the intestinal tract, yet the results obtained by experimental investigation have been fully as inconclusive. On the whole, however, the prevailing opinion among both clinical and laboratory investigators is that the so-called intestinal antiseptics really have little or no effect on the bacteria of the intestines, and that no valuable results are to be expected from their use. Nevertheless, as Steele[1] points out, the investigations so far conducted on human material have been of questionable value. In some the index of the effect of the antiseptic on the intestinal bacteria has been the amount of aromatic substances in the urine, which is a totally unreliable test. Direct determination of the number of living bacteria in the feces by examination of plate cultures is also of little value, because a large number of the bacteria present in the small intestine are killed before the bacteria escape in the feces. Numerous investigations have also been made of the bacterial flora of the material escaping from fecal fistulas, but here the unnatural conditions impair the value of the results.

Probably the most valuable means of determining the amount of bacterial growth in the intestines consists in directly weighing the bacteria isolated from the feces by the method of Strasburger. In this method the bacteria are separated from the other solid constituents of the feces by centrifugation, and many will probably be surprised to learn that from one-fifth to one-eighth of the total dry weight of the feces is made up of bacteria; the enormous number of bacterial cells that such a weight represents is beyond comprehension, and in conditions of intestinal infection the bacteria may constitute one-third or even more of the weight of the fecal solids.

The results of Steele's investigation of a limited number of cases by this method indicate that, in the normal individual at least, bismuth salicylate greatly reduces the number of bacteria to be found in the feces, while beta-naphthol is somewhat less effective. If the intestinal tract is diseased, however, it is probable that irritating antiseptics may rather increase bacterial growth, because the injurious effect on the normal protective agencies of the gastrointestinal tract may more than offset any antiseptic effect that the drug may exert.

1. Jour. Med. Research, 1908, xviii, 93.

Furthermore, it may well be that intestinal antiseptics, even when they do destroy the bacteria of the intestines, do more harm than good, for it is generally agreed that the normal bacterial flora is of great defensive value in suppressing the growth of more noxious forms, and the latter might prove more resistant to antiseptics than the former, so that the natural means of defense may be impaired by antiseptics and permit the objectionable bacteria to multiply with but little opposition. However, the fact that intestinal antiseptics may really decrease the amount of intestinal bacteria, at least under certain conditions, is a matter of importance, while the uncertain value of these drugs under differing conditions, and the irregularity of the results of different investigators, indicate how great is the need of further scientific investigation of this subject.

COLONIES FOR THE NEURASTHENIC POOR.

The results of state control and care of the insane and epileptic have shown the wisdom of the sociologic view that sound biologic laws underlie the principle. The idea of the protection of the body social is gaining ground over the altruistic sentiment of preservation of the unfit through humanitarianism. On the other hand, there is a large class of borderland cases of hysteria, neurasthenia and psychoneuroses for which no adequate provision has been made in this country, but for which both sociologic and altruistic sentiment might well cooperate.

It may not be generally known that sanatoria of the colony type for the neurasthenic poor have been in successful operation in some parts of Europe for several years. The first to be established was "Haus Schönow," near Berlin, which opened in 1899. Since then others have appeared in Germany, Switzerland and Sweden. The International Congress for Assistance to the Insane, at the Milan meeting in 1906, adopted a resolution expressing a general desire to see "popular colony sanatoria for the nervous," organized and erected in propitious localities, which should be open to all without preliminary formalities. This indorsement and the record of the practical workings of the colonies themselves have led various scientific men to visit and study them, and gradually marked interest in the subject is being awakened in other countries, especially among neurologists.

At present these colonies are supported partly by private contribution and partly by state funds. Undoubtedly, however, it is only a question of time when full state support will be given to this charity in the countries above mentioned. The United States should not be backward in taking up the work of forming state colonies for sufferers from our national ailment. The social, economic and medical aspects of the problem are urging solution. The cure of neurasthenia and hysteria can not be effected in general hospitals or ambulatory clinics, and successful treatment of these conditions demands qualities possessed by few physicians. A congenial occupation frequently offers the best remedy for many of their manifestations. The treatment which the poor are at present unable to obtain, from financial reasons, in private sanatoria, could be suitably provided in colonies. Neuroses and psychoneuroses are undoubtedly increasing, and the ultimate tendency of these disorders is the hereditary production of even graver conditions. Colony treatment would, therefore, be in the line of prophylaxis. We must ultimately recognize the menace to the public health of the existence of this numerous class of nerve weaklings, and we must rationally base our treatment on the restoration of normal physical conditions. The sanatorium affords a change of surroundings, proper food and medical equipment, rest, and yet proper occupation.

Möbius, Peretti, Determann, Grohmann, Lähr and other German writers have laid down various principles of treatment of these cases in colony sanatoria. Jacoby,[1] in this country, is advocating their establishment here. In one of the Boston hospitals treatment of certain organic and functional diseases in the same building has been found beneficial to both classes of patients. So far, however, in foreign practice it has been considered advisable to exclude all organic cases from colonies for functional conditions, and this would seem to be the rational attitude to adopt.

THE RURAL HEALTH OFFICER.

In the present sanitary activity in this country the public health officer, especially in rural districts, is a most important factor. For instance, it has been held that the prime essential in the antituberculosis campaign is not the sanatorium, the day camp, the dispensary, the visiting nurse, the illustrated lecture, the instructive leaflet or the relief fund; it is the efficient health officer. On the principle that the whole body will be sound if the individual cells composing it are normal, there is no doubt that state and national health affairs would present little difficulty were rural health conditions properly conserved.

Health officers, to be sure, are sometimes inefficient; and regarding our minor ones at least the reason is that they generally owe their positions to politics, which means the spoils system. An officer under such obligation, while well-meaning enough, would hesitate to offend one or another of his fellow-townsmen—perhaps the "boss" who bestowed his appointment on him. Too often the incumbent's own professional brethren look askance at him and refuse him their loyal support. He is often without the authority to enforce wholesome, though elementary and necessary measures; usually he is not trained in the principles of sanitary science and in their application to public affairs. Excellent men hold

1. New York Med. Jour., April 18, 1908.

such positions; they accept them from a sense of public duty; but they are almost never sufficiently compensated—generally they are absolutely uncompensated by the government.

Under such circumstances these men must depend on private practice or some other remunerative side occupation for a living. Their unofficial occupations are often so exacting that their public duties must remain inefficiently done or altogether neglected. In this respect, however, it is likely that we are not so badly off as they are in England, if we may judge by the fact that there are, in all England and Wales, but four rural districts whose medical officers give their whole time to their official duties. One of these officers, in a district of nearly 60,000 acres, with a population of 14,000, is a veritable Pooh-Bah, being highway surveyor, inspector under the petroleum acts, collector to the board of guardians, vaccination officer, registrar of births, deaths and marriages, and collector of income taxes. It would, indeed, not be surprising if an unhealthful dwelling or polluted well should occasionally escape the examination of such a busy man. We can understand how under such circumstances the *Practitioner's*[1] story might be realized. This relates how a lady from the city expatiated at the village tea on the delights of drinking that delicious beverage made from the pure, crystal water of the rustic well; how presently there appeared on the scene an indiscreet agriculturist, who triumphantly held up a dripping and much defunct cat that had for some weeks been missing, and which he had just hauled out of that same well.

The status of the public health officer should surely be raised in the near future. The reason why thus far it has not been of adequate dignity, authority and efficiency is, besides those here set forth, that its fundamental and vital importance has not yet been sufficiently recognized in the community. The position of health officer should be absolutely independent of the favor or disfavor of political rings, free from the possibly conflicting claims of private practice. Dr. Herman M. Biggs, in his address as president of the National Association for the Study and Prevention of Tuberculosis, indicated two steps essential to the making of an efficient health officer: first, the provision of the necessary instruction, and next, the restriction of appointments to those who have become qualified. Very few, indeed, of our medical institutions provide instruction in public prophylaxis; they should all have courses on this subject. Other means of education are county bacteriologic laboratories,[2] and the facilities for the detection and diagnosis of disease which are now being provided in a number of states and by municipal health departments.

1. Returns of the Medical Officers and Inspectors of Nuisances in the Rural Districts of Each County in England and Wales, Practitioner, December, 1907.
2. The County Bacteriologist, THE JOURNAL, A. M. A., Oct. 27, 1906, p. 1382.

LEGISLATION IN NEW YORK.

Information received from New York indicates that the state legislature, which adjourned last week, passed the "optometry" law and that it is now in the hands of Governor Hughes. No more striking example could be desired of the inconsistency of legislation regulating the practice of medicine. Last year, after a long-drawn-out campaign involving discussions of the principles regulating medical practice participated in by all branches of the medical profession and all sects of "healers," as well as by many of the newspapers of the state the legislature adopted a law doing away with the three boards which had previously existed and establishing a single board and a single standard. Now, in less than a year after this bill became a law, the same legislature passes a bill establishing a board of "optometrists," whatever they may be. Fortunately, the present governor of New York is noted for his ability to go to the bottom of every question submitted to him. It will not require a very lengthy investigation for Governor Hughes to ascertain that the proposed law is scientifically unsound and practically unwise. It is a pleasure to report that the antivivisection bill, regarding which there was so much preliminary discussion, was withdrawn by the member of the legislature who introduced it.

ARMY MEDICAL REORGANIZATION BILL BECOMES A LAW.

The Army Medical Reorganization Bill, which had been in the hands of a conference committee of the Senate and House, has been modified to the satisfaction of both houses, adopted by them and signed by President Roosevelt. The bill became a law practically as reported by the Senate committee, with the exception of some modifications made in the House, reducing the number of medical officers of the higher grades. The passage of this bill insures an adequate medical staff for the Army in time of peace, means of expansion to meet war conditions or special demands, and sufficient inducement in the way of pay, rank and promotion to attract a desirable class of young physicians to enter the Army Medical Service. It also insures the abolition of the contract surgeon system. Provision is made for a medical reserve corps, auxiliary to the regular medical corps, from which additional medical officers can be drawn in time of war. Those officers of the medical department, as well as those members of Congress who have worked earnestly for years to secure the passage of this bill, are entitled to congratulations on securing these results, so vital to the best interests of the Army and of the nation.

ONE DUTY OF COUNTY SOCIETIES.

In another department[1] will be found a summary of the press comments of Mississippi papers regarding Dr. McCormack's recent tour through the state. One of the most striking evidences of the readiness of the public to improve sanitary conditions is shown by the results of his statements in Vicksburg regarding the slaughter

1. Medical Economics, page 1446.

houses in that city. During the day preceding his lecture he visited the local slaughter houses and in the evening described the conditions as he found them. Almost immediately the Vicksburg *Morning Democrat* began an investigation, with the result that conditions were discovered in the slaughter houses which, according to that paper, were indescribable. The *Democrat* is now demanding, for the sake of the people, proper regulation and control of these establishments. This incident contains a lesson: No county society is fulfilling its mission or is doing its duty so long as the meat and milk supplies of the community are open to suspicion. The society should be thoroughly informed on the sources from which the milk is obtained and the manner in which the fresh meat of the community is prepared and supplied. In at least two-thirds of the towns and cities of the United States there is work to be done along these lines that is sadly needed. If county societies wish to demonstrate their value to the public, let them begin by learning and making public the actual conditions affecting the public health, and so arouse the people to action.

REED FOR SENATOR.

Newspaper reports from Ohio indicate that pressure is being brought to bear on Dr. Charles A. L. Reed of Cincinnati to induce him to become a candidate for the United States Senate in place of Senator Foraker, whose term expires next March. It is hoped that Dr. Reed will consent to make the sacrifices necessary for such a candidacy. This decision would be in accord with the recommendations adopted last year by the House of Delegates, urging that physicians offer themselves as candidates for both houses of Congress. Dr. Reed has long been well and favorably known as a prominent member of the medical profession. He was president of the American Medical Association in 1901, resigning as trustee to accept this office. Since 1903 he has been chairman of the Committee on Medical Legislation. He has long been distinguished for his interest in and knowledge of public affairs. As special commissioner to Panama a few years ago he presented a report that attracted the attention of the entire country and which brought about much needed reforms. He is well and favorably known throughout Ohio and would fill the position of United States senator with dignity and credit to himself, to his state and to the medical profession. As an authority on sanitary and hygienic questions the presence on the floor of the Senate of a well-known and able physician closely in touch with latter-day progress in science and medicine would be of incalculable value. It is hoped that the citizens of Ohio will be able to induce Dr. Reed to become a candidate and that the legislature of that state may see fit to send him to Washington as the junior senator from Ohio.

Treatment of Mercurial Poisoning.—L. Sabbatani states that experiments on rabbits demonstrated the efficacy of sulphydric acid by the mouth and rectum and by inhalation in treatment of mercurial poisoning. It is given in small and frequent doses, and seems to transform the mercury into harmless sulphids while hastening its elimination. The details of his research were published in the *Riforma Medica* for July 13, 1907.

Medical News

CALIFORNIA.

Society Reorganized.—At a meeting of medical men of Kings County, held recently at Hanford, the Kings County Medical Society was reorganized with the following officers: President, Dr. Robert W. Musgrave; secretary, Dr. Charles T. Rosson, and treasurer, Dr. Edmond Dixon, all of Hanford.

Druggists Fined.—Two druggists of San Francisco, who were selling poisons without the prescription of a physician, pleaded guilty April 6 and were fined $50 each, with the alternative of 50 days in jail. All fines were promptly paid.——Twenty-nine complaints have been sworn to against druggists and all for similar offenses.

Found Guilty.—F. M. Hoque, San José, charged with practicing medicine without having first obtained a license from the State Board of Medical Examiners, is said to have been found guilty April 1, and fined $100. The defendant gave notice of appeal.——Former coroner, Dr. R. S. Lanterman, Los Angeles, charged with falsifying expense accounts against the county, while holding office, is said to have been found guilty by the jury April 7, but recommended to mercy.

Hospital Notes.—The new Sequoia Hospital, Eureka, was thrown open to the public for inspection April 4.——The Western Hospital Association has been incorporated at Los Angeles with a capital stock of $25,000.——The Douglas Hospital Association has been incorporated in Los Angeles County, with a capital of $50,000.——The Shasta County Hospital, Redding, is said to be full to overflowing. A new ward is to be built for the accommodation of tuberculosis patients.

DISTRICT OF COLUMBIA.

Medical Society Meets.—The Medical Society of Georgetown University held its annual meeting April 11 and elected the following officers: President, Dr. John F. Moran; honorary president, Dr. Warwick Evans; vice-presidents, Drs. Edwin B. Behrend, Thomas F. Lowe, Loren B. T. Johnson, J. Llewellyn Eliot, William E. Rogers and George W. Wood; corresponding secretary, Dr. Roy D. Adams; recording secretary, Dr. Ralph A. Hamilton; treasurer, Dr. Prentiss Wilson; members of the business committee, Drs. Wilfred M. Barton, John J. Repetti and Paul B. Johnson, and historian, Dr. J. Llewellyn Eliot.

Entertain Professor Schäfer.—Prof. E. A. Schäfer, F.R.S., of the University of Edinburgh, delivered a lecture April 23 on "Internal Secretion," before the Medical Society of the George Washington University. The lecture was followed by a smoker. April 22 a dinner was given at the Shoreham Hotel in honor of Professor Schäfer by representative educational and medical men of Washington. Brief speeches of welcome were made by President Needham, George Washington University; President Buell, Georgetown University; Dr. Barchfeld, member of Congress; Surgeon-General Wyman, United States Public Health and Marine-Hospital Service; Dr. White, superintendent of the Government Hospital for the Insane; Professor Shields, Catholic University of America; and Professor Franz, George Washington University, to which Professor Schäfer fittingly replied.

FLORIDA.

County Society Meeting.—At the annual meeting of the Valusia County Medical Society, held in Daytona, recently, the following officers were elected: President and delegate to the state medical society, Dr. Edward L. Stewart; vice-president, Dr. J. P. Esch; secretary-treasurer and censor, Dr. Hiram H. Seelye; and censor to fill unexpired term, James E. Rawlings, all of Daytona.

GEORGIA.

Charge Against Physician Dismissed.—Dr. Arthur M. Spier, Macon, bound over from the recorder's court to the city court on the charge of violation of the prohibition law, in writing a prescription for alcohol for a patient, was discharged by Judge Robert Hedges, the case not even going to the jury.

State Society Meeting.—The fifty-ninth annual meeting of the Medical Association of Georgia was held in Fitzgerald, April 15, 16 and 17. The following officers were elected: President, Dr. Thomas D. Coleman, Augusta; vice-presidents, Drs. William B. Armstrong, Atlanta, and Ralston Lattmore, Savannah; secretary, Dr. Claude A. Smith, Atlanta, councilors: Drs. J. Lanton Hiers, Savannah, first district; Dr. Fred D. Patterson, Cuthbert, second district; Dr. Thomas J. McArthur, Cordele, third district; Dr. William L. Fitts, Carrollton, fourth district, and Dr. Henry M. Fullilove, Athens, eighth district, leaving the remaining districts to be sup-

plied, and delegates to the American Medical Association, Drs. William W. Owens, Savannah, and Henry F. Harris Atlanta. Macon was selected for place of meeting for 1909.

Society Meetings.—The Fourth District Medical Society was organized at Columbus March 6, by Dr. Edward C. Davis, Atlanta, chairman of the board of councilors. The following officers were elected: President, Dr. Charles L. Williams, Columbus; vice-president, Dr. M. M. Hallum, Carrollton, and secretary-treasurer, Dr. Charles A. Dexter, Columbus.——The Seventh District Medical Society was organized at Rome, March 11, with the following officers: Dr. Ross P. Cox, Rome, president; Dr. Charles F. McLain, Calhoun, vice-president, and Dr. Harlan L. Erwin, Dalton, secretary-treasurer.——Physicians of the second congressional district met at Albany, March 22, and with the aid of Dr. Mallie A. Clark, Macon, councilor for the Sixth district, perfected the organization of the Second District Medical Society. Dr. Wallace W. Bacon, Albany, was elected president; Dr. William J. Jennings, Blakely, vice-president, and Dr. Hugo Robinson, Albany, secretary-treasurer.——At a recent meeting of the Elbert County Medical Society the following officers were elected: President, Dr. William J. Mathews, Elberton; vice-president, Dr. James E. Cole, Middleton; secretary-treasurer, Dr. Albert S. J. Stovall, Elberton; censors, Drs. Beverly W. Hall, Bowman; L. Pope Eberhardt, Eberton, and O. B. Walker, Bowman; and delegate to the state association, Dr. Amos C. Smith, Coldwater.——At a meeting of the Irwin and Ben Hall Counties Medical Society, held at Fitzgerald, March 24, the following officers were elected: Dr. John C. Luke, Ocilla, president; Dr. William D. Dorminy, Fitzgerald, vice-president; Dr. Lyman S. Osborne, Fitzgerald, secretary-treasurer, and Dr. J. L. Frazer,, Fitzgerald, delegate to the state association.——The Emanuel County Medical Association held a meeting at Swainsboro, April 8, and elected the following officers: Dr. James W. Bowie, Summit, president; Dr. J. H. Chandler, Swainsboro, secretary-treasurer; Dr. Edward T. Coleman, Graymont, delegate to the state association, and Dr. R. Elliott Graham, Nunez, alternate.

IDAHO.

Charge Dismissed.—The complaint against Dr. L. F. Inman, Lewiston, charging him with criminal abortion, was dismissed by the Idaho State Board of Medical Examiners on account of errors. The complainant intends to file a new complaint, if possible free from errors.

Society Meeting.—At the annual meeting of the South Idaho District Medical Society, April 17, the following officers were elected: Dr. James A. Young, Caldwell, president; Dr. C. L. Dutton, Meridian, vice-president, and Dr. Franz H. Brandt, Boise, secretary-treasurer. The next meeting will be held at Caldwell in July.

Personal.—Dr. Howard T. Ricketts, Chicago University, is in Idaho studying the Rocky Mountain spotted fever (tick fever), which prevails in some districts in the southern part of the state for four months, beginning in April.——Dr. W. F. Smith, Boise, has returned after ten weeks in the East.——Drs. Charles W. Craik and J. L. Magee have sold the Cœur d'Alene Hospital to Drs. M. A. Dorland and Hunter.——Dr. George E. Hyde and associates have leased the dormitory building at Rexburg and will establish a hospital in that place.

Illegal Practitioners.—The Idaho State Board of Medical Examiners has initiated an active campaign to purge the state from all forms of illegal practitioners. J. J. Raaf, of Hailey, who has successfully defied the medical law for four years, appeared at Cœur d'Alene, April 7, to take the examination for the third time. He is said to have finished his paper on the first branch, but gave up on the second branch when the examiner refused to tell him the name of the tenth cranial nerve. He has been arrested and tried three times and pleads not guilty, on the witness stand admits the charges in full and the juries acquit him.

ILLINOIS.

Personal.—Dr. William B. Peck, Freeport, sailed for Europe April 25.—Dr. Robert B. Spalding, Clinton, has removed to Selma, Cal.

Charity Ball.—The first annual charity ball for the benefit of Oak Park Hospital given in the Oak Park Club, April 21, under the auspices of the medical staff of the institution, netted almost $2,000.

Smallpox.—On April 16, for the first time since last summer, Peoria was without a case of smallpox. Fairbury reports 9 cases, all under strict quarantine.——No new cases have occurred in Chenoa for four weeks.—Twelve cases are reported in Virginia.——Dr. Thomas H. Griffiths, inspector of the State Board of Health, was sent to Monee, April 20, to investigate a reported outbreak of smallpox.

Meeting of County Society Secretaries.—There will be a meeting of secretaries of component county medical societies of the State of Illinois at the annual meeting of the Illinois State Medical Society in Peoria, May 19-21. The following program has been arranged: "How to Make the Secretary's Work Easier," Dr. Herbert N. Rafferty, Robinson; "What Can a Secretary Do to Obtain More Members?" Dr. Edward W. Fiegenbaum, Edwardsville; "What the President Can Do to Help the Secretary," Dr. Robert A. McClelland, Yorkville; "The Problem of the Small County Society," Dr. Harry M. Ferguson, Morris, and "How Does Post-Graduate Study Help the County Society," Dr. Marion K. Bowles, Joliet.

Result of Investigation.—As a result of the investigation of the state penal and charitable institutions by the committee of the legislature, three bills are to be introduced, the first of which will provide for a new commitment law to make impossible the sentencing of sane but incorrigible girls to insane asylums and of adults to the state reformatory at Pontiac. This bill may also provide for the reorganization of the three penal institutions of the state under one head, and the regrading of prisoners. The second bill will provide an appropriation of $30,000 to construct a wall 30 feet high about the grounds of the state reformatory at Pontiac, in accordance with the request of the superintendent. The third bill contemplates doing away with the seventeen sets of trustees who now control the destinies of as many institutions, and placing the management of all penal and charitable institutions in the hands of business and professional men.

Chicago.

Vaccination Decision Reversed.—The Supreme Court is said to have declared that the state law, which makes vaccination compulsory is illegal.

German Medical Society Banquet.—On April 18 the annual banquet and meeting of the German Medical Society was held at the Bismarck Hotel, after which a vaudeville entertainment was given.

Benefit for Convalescent Home.—On April 22 a benefit performance was given at Orchestra Hall for the benefit of the Home for Convalescent Women and Children, the net receipts of which were about $2,000.

Smallpox.—During the week ended April 25, 10 smallpox patients were sent to the Isolation Hospital, 3 of whom were from Evanston, Ill., and 8 of whom contracted the disease from the same source, an unvaccinated colored boy with a mild type of smallpox. At present there are 15 cases of smallpox remaining at the hospital.

Faculty Changes.—Dr. John B. Murphy has resigned as professor of surgery and co-head of the department in Rush Medical College, and has accepted the professorship of surgery, head of the department, in Northwestern University Medical School, and the position of attending surgeon at Mercy Hospital.——Dr. Weller Van Hook has resigned the chair of surgery in Northwestern University Medical School.

Communicable Diseases.—During the week ended April 25, 607 cases of communicable diseases were reported; of these, 326 were of measles; 78 scarlet fever; 62 diphtheria; 44 tuberculosis; 28 chickenpox; 25 typhoid fever; 24 whooping cough; 7 smallpox, and 12 cases of minor importance. All the diseases of childhood, with the exception of whooping cough, showed an increase compared with the preceding week.

Death Report.—The total deaths reported during the week ended April 25 were 623, 4 fewer than for the preceding week and 55 fewer than for the corresponding period of last year. Chief among death causes were: Pneumonia, 112; consumption, 78; nephritis, 48; violence (including suicide), and heart diseases, each, 47; diarrheal diseases, 40; nervous diseases, 25; cancer, 23; acute contagious diseases, including diphtheria, scarlet fever, measles and whooping cough, 21.

INDIANA.

March Disease and Death.—There were reported to the State Board of Health during March 3,201 deaths, 301 fewer than for the corresponding month of 1907, the respective annual death rates being 13.8 and 15.3 per 1,000. Consumption caused 416 deaths; pneumonia, 483; diphtheria, 18, as compared with 35 in March, 1907; typhoid fever, 45, as compared with 40 in March, 1907; scarlet fever, 10; cancer, 110; smallpox, 2, and violence, 154.——During the month 164 cases of diphtheria

were reported; 245 cases of typhoid fever; 284 cases of smallpox, and 150 cases of influenza. The order of disease prevalence is as follows: Influenza, bronchitis, rheumatism, measles, pneumonia, tonsillitis, scarlet fever, smallpox, typhoid fever, pleurisy, diarrhea, diphtheria, chickenpox, whooping cough, erysipelas, inflammation of bowels, intermittent and remittent fever, dysentery, typho-malarial fever, cerebrospinal meningitis, cholera morbus, puerperal fever and cholera infantum.

MARYLAND.

Sanatorium Buys Farm.—A farm adjoining the Eudowood Sanatorium has been leased by the directors of that institution for the establishment of a farm colony for convalescent consumptives. The lease was effected through the generosity of several wealthy men without drawing on the funds of the institution. It is intended for poor patients who are to be provided with outdoor work for six months or a year after leaving the hospital.

Contracts Awarded.—The directors of the State Sanatorium for Consumptives, Sabillasville, have awarded contracts for the construction of a power-house and four shacks. Each shack will be 125 feet long, 24 feet deep and one story in height, and will accommodate 20 patients. Each shack will be equipped with steam heat, electric lights, hot and cold baths and entire glass fronts. The institution will be ready for 20 patients June 1, and will be open to all white patients who hav resided in the state one year.

Elections.—The George's Creek Branch of the Allegany County Medical Association on March 21 elected the following officers: President, Dr. Timothy Griffith, Frostburg; vice-presidents, Drs. A. G. Smith, Ocean, and James O. Bullock, Lonaconing; secretary, Dr. Thomas A. F. DeNaouley, Frostburg; treasurer, Dr. Oliver W. McLane, Frostburg, and censors, Drs. John H. McGann, Barton; Oliver W. McLane, Frostburg, and James O. Bullock, Lonaconing.——At the annual meeting of the Kent County Medical Society, held in Chestertown, March 31, Dr. G. Irvin Barwick, Kennedyville, was elected president; Dr. William S. Maxwell, Stillpond, vice-president; Dr. Henry G. Simpers, Chestertown, secretary-treasurer, and Dr. W. Frank Hines, Chestertown, delegate to the Medical and Chirurgical Faculty of Maryland

Society Meetings.—At the annual meeting of Montgomery County Medical Association, held April 21, the following officers were elected: President, Dr. Charles Farquhar, Olney; vice-president, Dr. Otis M. Linthicum, Rockville; secretary-treasurer, Dr. John L. Lewis, Bethesda; censors, Drs. William L. Lewis, Kensington, Otis M. Linthicum, Rockville, and Horace B. Haddox, Gaithersburg; delegate to state association, Dr. James E. Deets, Clarksburg, and alternate, Dr. Upton D. Nourse, Darnestown. Dr. George M. Sternberg, surgeon-general, U. S. Army (retired), delivered an address on "Tuberculosis."——The fourth Maryland conference of charities and correction held a meeting in Baltimore, April 30 and May 1, at McCoy Hall, Johns Hopkins University. The care of defectives and management of county jails and almshouses and other humanitarian subjects were discussed. Two sessions were held, jointly with the Medical and Chirurgical Faculty of Maryland and the State Federation of Women's Clubs.——At the annual meeting of Somerset County Medical Association, held at Crisfield, Dr. William F. Hall, Crisfield, was elected president; Dr. Charles T. Fisher, Princess Anne, vice-president, Dr. Ralph L. Hoyt, Oriole, secretary.——At the annual meeting of the Cecil County Medical Society, held in Elkton, April 16, Dr. Howard Bratton, Elkton, was elected president; Dr. Jesse J. Wright, Warwick, vice-president; Dr. Canullus P. Carrico, Cherry Hill, secretary-treasurer; Dr. George S. Dare, Rising Sun, delegate to the Medical and Chirurgical Faculty of Maryland, and Dr. John H. Jamar, Elkton, censor.

Baltimore.

Measles Epidemic.—During the week ended April 18, 109 cases of measles were reported in the state.——Measles is epidemic at St. Vincent's Infant Asylum, where 55 of the 200 children are ill.

Midwife Fined.—The first conviction under the law passed to prevent blindness of infants was obtained in the criminal court March 27, when Mrs. Mary Fogler, a midwife, was found guilty and fined $25 and costs, amounting to $43.

The Martins in Baltimore.—Dr. August Martin and his son of Berlin, Germany, spent a week in Baltimore as guests of Dr. Howard A. Kelly. The senior Dr. Martin, who is Medical Councilor of the German government, delivered a clinical lecture at Johns Hopkins Hospital, April 13.

Physicians Lose Suits.—The suit of Dr. George A. Strauss against the United Railways and Electric Company for $10,000, for injuries alleged to have been received October, 1903, at its third trial, was decided in favor of the company.——In the case of Mrs. Margaret B. Leib against Dr. Irving Miller, in which the plaintiff claimed that she had not been properly treated for a fractured hip, the jury is said to have returned a verdict in favor of the plaintiff for $2,000.

Law Violators Arrested.—Dr. M. Curby Burkhard and N. W. Seifert, claiming to be Dr. Burkhard's manager, were arrested, April 22, on a warrant charging them with violating the law by the manufacture and sale of a medicine for women known as "Female Pills." The pills are said to have been sent all over the United States. They were committed to jail pending the action of the federal grand jury in default of bail of $5,000 and $2,500, respectively.——Robert H. Darrah and Frederick Morris have been arrested charged with practicing medicine without a license, on complaint of the president of the State Board of Medical Examiners.

MASSACHUSETTS.

Benefit for Floating Hospital.—A benefit performance was given at Potter Hall, Boston, March 25, by the Emanon Club, for the benefit of the Boston Floating Hospital.

Physician Wins Suit.—A verdict of $1,178 in favor of Dr. William M. Conant, Boston, was found against George R. Evans, March 26, by direction of Judge Hardy. Dr. Conant sued for $1,000 for performing a surgical operation on the son of the defendant.

Opens Hospital to Pay Patients.—At the March business meeting of the Woman's Charity Club, Boston, it was voted to permit physicians in good standing, belonging to the Massachusetts Medical Society to send private patients to the Woman's Charity Club Hospital and treat them, as the institution has accommodation for other than free patients.

New Dormitory for Harvard Students.—A large dormitory for students of Harvard Medical School, to be erected on Longwood Avenue, near the new building, is a possibility in the near future through the efforts of Dr. J. Collins Warren. Plans have already been prepared, which include a club house, commons, library, billiard room and hall, seating from 500 to 1,000.

Exhibition of Engravings of Physicians and Surgeons.—An exhibition of prints and engravings of famous physicians and surgeons was opened at Harvard Medical School, April 6, including a large group of works contributed by the Royal College of Surgeons, England, and by Dr. Walter G. Chase and Dr. Ernest B. Young. The exhibition will be on public view for five weeks.

Communicable Diseases.—The high school at Topsfield has been closed on account of an epidemic of diphtheria.—By order of the Board of Health of the South chool building, Brockton, has been closed for two weeks on account of smallpox.——Scarlet fever of mild type has appeared at Harvard, where eighteen students are confined at Stillman Infirmary and several other patients are under quarantine in the dormitories.——Jamaica Plain reports 246 cases of typhoid fever. The health officer is positive that the infection is due to milk, but the source of pollution has not yet been discovered.——On April 16, 26 new cases of typhoid fever were reported in Boston, on April 17, 37 cases, on April 18, 15 cases. The total for the city since April 1 is 507 cases.

The Chelsea Fire.—The offices of the following physicians were destroyed in the recent fire in Chelsea, Boston, April 12: Drs. J. Thomas, E. A. Brown, Charles C. Carroll, Frank H. Chase, William R. Chipman, Joseph B. Fenwick, Louis M. Freedman, Frank S. Garrett, Elias Goldberg, Thomas W. Green, E. Frank Guild, Frederick B. Gunter, Samuel Hobermann, Frances C. James, Henry J. Jelen, Edward S. Johnson, Richard H. Mansur, Patrick H. McCarthy, Isaac B. Molin, Frederic Plummer, Edward J. Powers, J. Morrill Putnam, Frederick S. Raddin, Ernest B. Schallenbach, Charles H. Shackford, Benjamin Van Magness, Jr., and Fred Van Mangess. The wife of Dr. Fenwick was burned to death.——The Rufus Frost and Children's hospitals were destroyed, but the patients were removed without casualty.——The physicians in the city met April 13, in an emergency meeting, to devise means of checking the spread of any contagious diseases resulting from conditions following the fire.

Vital Statistics.—For the ten weeks ended April 18 there were reported to the Boston board of health 2.371 deaths, equivalent to an annual death rate of 20.28 per 1,000, and ex-

actly the same as for the corresponding period of 1907. There were 543 cases of diphtheria, with 35 deaths; 726 of scarlet fever, with 18 deaths; 549 of typhoid fever, with 24 deaths; 1,902 of measles, with 17 deaths; 553 of tuberculosis, with 265 deaths, and no deaths or cases of smallpox. Of the deaths 374 were due to pneumonia; 10 to whooping cough; 274 to heart disease, and 51 each to bronchitis and marasmus. Of the deaths, 446 were under one year of age, 651 under 5 years of age, and 589 over 60 years of age. There is, therefore, quite an extensive epidemic of measles, the number of cases reported in the last week being 306. Typhoid fever, too, shows a great increase. Of the cases reported 509 have been reported since March 28. Most of these have been discovered in the district known as Jamaica Plain and have been traced to a "walking typhoid" patient who was a milk taster by trade. Another large group is in East Boston, but the source is as yet unknown.

Personal.—Dr. Franklin S. Newell has been appointed assistant professor of obstetrics and gynecology; Dr. John Warren, assistant professor of anatomy, and Dr. David Cheever demonstrator of anatomy in Harvard Medical School.——Dr. Eugene Hill, Chelsea, has been appointed physician at the Chinese Detention Hospital, Malone, N. Y., vice Dr. Stacy D. Williamson, deceased.——Dr. William E. Roberts, Boston, has been appointed physical director in the Central Y. M. C. A., Cleveland, Ohio.——Dr. Charles Dudley, Cambridge, saved the life of his two children, April 7, by throwing one out of his automobile and leaping with the other over the side, just before a collision with a heavy runaway fire wagon.——Dr. William H. Davis, Dorchester, has been appointed medical inspector by the president of the Board of Health, vice Dr. James J. McDevitt.——Dr. James Foster has been made chairman and Dr. Willis LeB. Hale, secretary, of the North Attleboro Board of Health.——Dr. John A. Gordon, Sailors Snug Harbor, Quincy, has returned from New Orleans.——Dr. Charles P. Morrill has been appointed school physician of North Andover, Dr. Walter P. Hutchinson, medical inspector in the public schools of Abington, Dr. Clara M. Greenough, medical examiner for the schools of Greenfield, and Drs. Emanuel Harris, Michael H. Shea, Frank H. Beckett, George G. Parlow, F. DeBorgia, Pierre T. Crispo, Thomas Cox and David H. Fuller have been appointed medical inspectors of the schools at Fall River.——Dr. and Mrs. Henry Lee Morse, Dedham, are taking a trip to the Mediterranean.——The Rumform committee of the American Academy of Arts and Sciences has made a grant of $200 to Dr. Lawrence J. Henderson, Harvard Medical School, in aid of his investigation on the direct determination of the physiologic heats of reaction.——Dr. Theobald Smith of Harvard University was elected a member of the National Academy of Sciences at its annual meeting in Washington, D. C., April 23.

MICHIGAN.

Physician Loses Suit.—A jury in the Circuit Court in Bay City is said to have returned a verdict for $2.000 in the suit of Peter Foster against Dr. Isaac E. Randall, in which it was claimed that the defendant had failed properly to treat a fractured leg. The defendant will appeal.

For Care of Consumptives.—The Board of Health, Detroit, has decided to begin at once the erection of a new contagious disease hospital, on Brush Street, in the rear of the Grace Hospital. It also instructed Health Officer Kiefer to submit plans and specifications for two tuberculosis shacks to accommodate 25 patients. The council appropriated $1,400 for the care of consumptive patients.

State Board Meeting.—At the regular meeting of the State Board of Health, held in Lansing, April 10, the board authorized the secretary to have printed in several foreign languages instructions as to the contagious character of the preventable diseases and the methods of preventing their spread. It also authorized the secretary to issue and have posted in public places placards regarding the danger of the spitting habit and the spread and prevention of tuberculosis.

Communicable Diseases.—There are said to have been 60 cases of typhoid fever at St. Clair, with three deaths.——The schools at Spring Lake and Manton have been closed on account of the prevalence of scarlet fever.——Several new cases of scarlet fever have been reportd to the Tecumseh Board of Health.——There are now 23 cases of scarlet fever in the contagious ward of Harper Hospital, Detroit.——Several cases of smallpox are reported in Rutland.——Cedar Springs has 4 cases of smallpox.

Personal.—Dr. W. Earle Chapman, Cheboygan, has been appointed lieutenant and assistant surgeon, N. G., Michigan, and assigned to Companies "K" and "F."——Dr. C. W. O'Brien, Wyandotte, was stabbed four times with a lancet in a fight in Detroit, March 29.——Dr. Thomas B. O'Keefe, Grand Rapids, has been appointed physician of Kent County, vice Dr. Clarence C. B. Hernam, resigned.——Dr. E. S. Gilmore, Ann Arbor, has been appointed superintendent of Wesley Hospital, Chicago.——Dr. Frank N. Martin, St. Joseph, has been compelled to give up practice on account of his health, and has gone to New Mexico.——Dr. Douglas Rothschild, former assistant city physician of Detroit, has been made surgeon for the Duluth, South Shore and Atlantic Railroad at Calumet.

MINNESOTA.

Physician Fined.—F. Young, Ogema, charged with practicing medicine without a license, is said to have pleaded guilty, April 7, and to have been fined $50 and costs, amounting in all to $63.70.

Personal.—Dr. Alexander J. Stone, St. Paul, has resigned from the State Board of Health.——Dr. Philemon Roy, St. Paul, who was operated on for appendicitis, March 27, is reported to be convalescent.——Dr. William J. Awty, Moorhead, was thrown from his buggy in a runaway accident, April 8, and was badly bruised, but escaped serious injury.

Society Meetings.—Rice County Medical Society held its annual meeting in Faribault, April 4, when the following officers were elected: President, Dr. Arthur C. Rogers, Faribault; vice-presidents, Drs. Warren Wilson, Northfield, and Francis M. Rose, Faribault; secretary-treasurer, Dr. William H. Rumpf, Faribault; censor, Dr. Evans E. Brubaker, Northfield; delegate to state society, Dr. Frederick U. Davis, Faribault, and alternate, Dr. Conrad W. Wilkowske, Faribault.——At the annual meeting of the Stearns-Benton County Medical Society, held in St. Cloud, April 16, the following officers were elected: President, Dr. Julian A. Dubois, Sauk Center; vice-president, Dr. James H. Beaty, St. Cloud; secretary-treasurer, Dr. John C. Boehm, St. Cloud; censor, Dr. John B. Dunn, St. Cloud; delegate to the state society, Dr. Claude B. Lewis, St. Cloud, and alternate, Dr. Arthur D. Whiting, St. Cloud.

Communicable Diseases.—Diphtheria is said to be raging at Henning, where two deaths have occurred. Schools and churches have been closed and public meetings have been prohibited.——The public school of Mapleton has been ordered closed for a week on account of diphtheria.——The public schools of Ceylon have been closed on account of an epidemic of measles.——Smallpox, diphtheria and measles are said to be epidemic in Eveleth.——A number of cases of smallpox are reported in and near Hendricks.——Carleton College, Northfield, was closed March 16 by the faculty on account of the appearance of a case of smallpox.——The secretary of the State Board of Health on March 25 issued an order that students failing to show proof or certificate of vaccination shall be barred from the University of Minnesota.——About a dozen cases of smallpox are reported from the State School of Agriculture, St. Anthony Park.——Several cases of smallpox are reported among the pupils of the Riverside School, South St. Paul.——Two nurses at the State Hospital for the Insane, Anoka, are ill with smallpox.——An epidemic of scarlet fever is said to exist in St. Anthony Park.——Scarlet fever is prevalent in the town of Holt.

MISSISSIPPI.

Hospital Notes.—Work has been begun on a twenty-room addition to the Gulf Coast Health Resort, Biloxi.——A bill has been introduced in the senate to provide for the establishment of a charity and pay ward hospital in Jackson to be supported by state appropriation.

Charity Hospital Appointments.—Dr. L. B. Austin has been elected steward of the State Charity Hospital, Vicksburg.——Dr. J. J. Wilson, interne, has resigned and will practice in Coldwater.——Dr. John W. D. Dicks has been re-elected house surgeon of the Charity Hospital, Natchez.

State Association Meeting.—At the forty-first annual meeting of the Mississippi Medical Association, held in Natchez, April 14, 15 and 16, the following officers were elected: President, Dr. James W. Gray, Clarksdale; vice-presidents, Drs. James B. Bullitt, University, and Jefferson D. Donald, Hattiesburg, and secretary-treasurer, Dr. Hugh L. Sutherland, Rosedale. The association will meet next year in Jackson.

MISSOURI.

Personal.— Dr. C. H. Neilson has been advanced from assistant professor to professor of physiologic chemistry in the St. Louis University.

NEW YORK.

An Appeal to the Medical Profession.—Dr. Frank Van Fleet, chairman of the committee on legislation of the Medical Society of the State of New York, and Dr. Walter E. Lambert, member of the committee on legislation of the Medical Society of the County of New York, have sent out the following appeal: The legislature has passed a bill creating a profession of optometrists, and it is up to the governor to sign or not to sign as the merits of the case appeal to him. The bill, which is Senate Bill No. 1033, defines the practice of optometry as follows: It creates a board of examiners of "five persons who shall possess sufficient knowledge of theoretical and practical optics to practice optometry and who shall have been residents of the state actually engaged in the practice of optometry for at least five years." It provides that any person who has been engaged in the practice of optometry for two years next prior to the passage of the act, may receive a license without examination, on recommendation of the board of examiners. This bill is an invasion of the sphere of medicine in one of its most important branches, and confers privileges on certain people, which, in accordance with the wording of the act, they are utterly incompetent to exercise. The bill grants to opticians the right to adjust lenses to people's eyes in need thereof, and denies them the right to use drugs. Without the use of drugs, in certain cases, even the most competent physicians can not properly adjust lenses to the eyes, especially in children, and great harm can be produced by attempting such practice without using drugs. The knowledge of optics alone, however extensive, does not render a person competent to do the work this bill would give opticians the right to do. To examine the eyes and adjust lenses one should have a knowledge of anatomy and physiology at least, but this bill provides only for a knowledge of optics. The many diseased conditions which may influence the eyes and vision are not considered at all. The ability to make a diagnosis is necessary to enable one to discriminate between visual defects due to diseases and those due solely to optical errors, both of which often exist at the same time, and this ability requires more than a knowledge of optics. The passage of this act denotes gross and inexcusable ignorance on the part of members of the legislature, or an utter disregard of the welfare of the community. It is a most vicious type of special legislation in that it permits an examining board of five members to discriminate between opticians who apply for certificates of exemption. The recommendation of this board is necessary before these certificates can be granted, and this board can limit its recommendations to a chosen few. If the physicians of this state will go on record with the governor, opposing this bill, it will never become a law. Will you write at once, urging the governor to withhold his approval?

New York City.

Abortionist to Prison.—Dr. Francis Gray-Blinn has been sentenced to not more than two years in state prison for attempting to perform a criminal operation.

Personal.—Dr. Simon Flexner, director of laboratories of the Rockefeller Institute for Medical Research, New York City, was elected a member of the National Academy of Science at its annual meeting in Washington, D. C., April 23.

School for Crippled Children.—A free school for crippled children of the East Side was opened April 13. It will accommodate 150 pupils, and is especially adapted to training these unfortunates so that they may become useful members of society.

Money for Hospitals.—More than $3,000 was cleared for consumptive children in the Loomis Sanatorium by a vaudeville entertainment given at the Plaza by amateurs.——The committee of the Hospital Saturday and Sunday Association, Mayor McClellan presiding, distributed the $71,000 realized among the hospitals on the basis of free days of service.

Registration of Tuberculosis Cases.—An important bill sent to the governor for his approval and signature was passed by the legislature, requiring the registration of all persons afflicted with tuberculosis. Another bill was sent to allow the city of New York to purchase land in the Croton watershed for enlarging and protecting its water supply system and to contract for the disposal of sewage of the villages within the watershed.

Contagious Diseases.—There were reported to the sanitary bureau for the week ended April 18, 1,640 cases of measles, with 46 deaths; 1,005 cases of scarlet fever, with 66 deaths; 444 cases of tuberculosis, with 189 deaths; 436 cases of diphtheria, with 51 deaths; 19 cases of typhoid fever, with 5 deaths; 13 cases of whooping cough, with 3 deaths; 7 cases of cerebrospinal meningitis, with 7 deaths; 108 cases of varicella and 2 cases of smallpox, a total of 3,674 cases and 367 deaths.

Ban on Fattened Oysters.—The board of health has been investigating the cultivation of oysters since 1904 and as a result has promulgated the following addition to the Sanitary Code "No oysters shall be held, kept or offered for sale anywhere in the city of New York without a permit in writing from the board of health and subject to the rules and regulations of said board." The aim of this measure is to prevent the sale of fattened oysters, which are usually fattened in beds polluted by sewage.

Bequests.—By the will of William Wheeler Smith, an architect, which has just been filed, the endowment fund of St. Luke's Hospital has been increased by nearly $3,000,000. The hospital will receive the benefit of practically the whole amount at present, and will get entire control of the money on the death of the testator's wife. This will make possible the immediate construction of a convalescents' home in the country. An offer of a plot of ground for a site for this home, which will be accessible to New York City, has been made, but the name of the would-be donor can not be made public as yet.——Miss Clement L. Stephens, who died April 1, made the following bequests: Home for Incurables, $10,000; for a free bed in St. Luke's Hospital, $5,000; New York Home for Convalescents, $2,000; Society for the Relief of Destitute Blind, $2,000; Society for Crippled Children, $2,500; Manhattan Eye and Ear Infirmary, $1,000; St. Luke's Hospital, $2,000; Home of Rest for Consumptives, $2,000, and Presbyterian Hospital, $2,000.——Samuel Scholle bequeathed $1,000 each to Mount Sinai Hospital and the Montefiore Home for Chronic Invalids.

OHIO.

Found Not Guilty.—In the suit of Esther A. Clark against Ralph A. Bunn, Dayton, in which the physician was sued for $5,000 for alleged malpractice in the treatment of an injury of the hand, the jury returned a verdict, March 25, exonerating the physician.

National Guard Appointments.—The following first lieutenants and assistant surgeons have been commissioned after examination: Dr. Leon G. Tedesche, Cincinnati, First Infantry; Dr. James C. Pence, Lima, Second Infantry; Dr. William C. Gill, Cleveland, Fifth Infantry; Dr. J. R. McDowell, Zanesville, Seventh Infantry; Dr. Charles A. Belich, Eighth Infantry; Dr. Howard J. Ware, Cincinnati, First Hospital Section, and Drs. Edwin A. Hamilton and John B. C. Eckstrom, Columbus, Second Hospital Section.

Medical Society Notes.—At the meeting of the General Practitioners' Medical Society, Columbus, March 26, the constitution was so amended as to admit to membership any registered practitioner of the city. A committee was also appointed to confer with the North Side Medical Society regarding the advisability of a merger. Dr. Isaac C. Edwards was elected treasurer.——The North Side Medical Research Society, Columbus, at its annual meeting, March 11, elected the following officers: President, Dr. Albertus C. Wolfe; vice-presidents, Drs. John F. Jones and Robert B. Taylor; secretary, Dr. Darlington J. Snyder, and treasurer, Dr. Earl W. Evans.——At the annual meeting of the Barberton Medical Society Dr. Frederick Lahmere was elected president; Dr. H. A. Snyder, vice-president, and Dr. George A. Brown, secretary.——The Columbus Academy of Medicine gave a banquet and smoker April 4, in celebration of the sixteenth anniversary of the founding of the organization.——At the semi-annual meeting of the Association of Assistant Physicians of State Hospitals, held at Gallipolis, April 2, Dr. Edson B. Morrison was elected president, and Dr. Samuel P. Fetter, secretary, both of the Ohio Hospital for Epileptics, Gallipolis.

PENNSYLVANIA.

Bequests.—By the will of the late Benjamin Whitman, Erie, bequests of $1,000 each are made to the Home of the Friendless and St. Joseph's Orphan Asylum, and a fund is created for newspaper workers and members of the Erie Typographical Union who may require care at either the Hamot Hospital or the St. Vincent Hospital.

Philadelphia.

Personal.—Dr. George A. Ulrich is suffering from a fracture of the right forearm.——Dr. Charles Browne sailed for Europe April 23.——Dr. Frederick Henry has been appointed editor in chief of the historical volume which is to be published in connection with Founder's Week.——Dr. George Weinstein, recently resident physician in St. Joseph's Hospital, has been

appointed physician-in-chief to St. Vincent's Home.——Dr. Frederick O. Waage has been appointed anesthetist to the Methodist Hospital.

Health Reports.—The total number of deaths reported for the week ended April 25 reached 499. This is an increase of 3 over the preceding week and a decrease of 109 from the corresponding week of last year. The principal causes of death were: Typhoid fever, 13; measles, 10; scarlet fever, 6; pertussis, 1; diphtheria, 8; consumption, 56; cancer, 25; diabetes, 4; apoplexy, 24; heart disease, 49; acute respiratory disease, 75; gastric disease, 11; enteritis, 13; Bright's disease, 50; congenital debility, 15; premature birth, 11; suicide, 5; accidents, 15; and marasmus, 2. There were 201 cases of contagious disease reported, with 27 deaths, as compared with 225 cases and 27 deaths reported in the previous week.

Charges Against Physician Upheld.—Dr. Louis J. Lauterbach, against whom charges of unethical and unprofessional conduct have been preferred, will remain a member of the Philadelphia County Medical Society until June. Whether he will then be suspended, expelled, reprimanded or absolved will then be determined. The Board of Censors of the Medical Society April 15 reported him guilty of the charges preferred. He is accused of diverting to his private practice patients who applied for free treatment at the Philadelphia Eye, Ear, Nose and Throat Institute, a chartered state institution, but under the directorship of Dr. Lauterbach. It was recommended that the courts be petitioned to revoke the charter of the institution.

More Filtered Water.—An increase in the filtered water supply to parts of the Twentieth, Thirty-second and Thirty-seventh wards was inaugurated April 6, and the Torresdale filtered water district now embraces the whole of the northeastern section of the city north of Girard Avenue between Broad Street and the Delaware River. North of Hunting Park Avenue and between Broad Street and the Schuylkill, the whole northwestern section of the city receives filtered water from the Roxborough plant, and the Belmont plant furnishes filtered water to the whole of West Philadelphia. The total filtered water output is at present 132,000,000 gallons daily, which will be shortly increased to 150,000,000 gallons. The Torresdale plant now filters 75,000,000 gallons, the Belmont plant 35,000,000 gallons, and the Roxborough plant 22,000,000 gallons.

TENNESSEE.

Medicine Vendor Fined.—William Champion was arrested at Mount Pleasant, April 10, charged with selling "patent medicines" without a license, and is said to have been fined $29.25.

Mulcted for Mistake.—The case of Homer Williams, Franklin, vs. Fleming & Williams, West Harpeth, and Coleman, Tompkins & Co., Nashville, in which morphin is said to have been sold for quinin, was decided April 14, the jury awarding the plaintiff $1,000.

Society Meeting.—At the annual meeting and banquet of the Nashville Academy of Medicine, held April 7, Dr. William H. Witt was elected president; Dr. William Litterer, vice-president; Dr. Holland M. Tigert, secretary-treasurer, and Dr. Matthew C. McGannon, delegate to the state association.

Smallpox.—The general vaccination order, which became effective in Nashville, February 30, is believed to be responsible for the fact that the Isolation Hospital is now without a tenant.——Several cases of smallpox are reported in the neighborhood of Montgomery; 17 cases are in the Shelby County Isolation Hospital and 3 cases of quarantine in the vicinity.——Smallpox has been stamped out at Huntington. During the epidemic 14 cases were reported in two houses.——Chattanooga has ordered 20,000 vaccine points for the vaccination crusade.

Colored Physicians Graduate.—The Medical, Dental and Pharmaceutical departments of Meharry College, Nashville, held their graduation exercises March 31. The principal address of the evening was delivered by W. P. Vernon, registrar of the United States Treasury. Dr. Charles A. Kelley, Clarksville, delivered the baccalaureate address. A medical class of 20 was graduated.—On April 8, the graduating exercises of the University of West Tennessee Medical School, Memphis, were held, when a class of 9 was graduated. The doctorate address was delivered by Prof. Robert G. Martin.

Personal.—Dr. F. G. Hudson, Camden, while making a professional call, was thrown from his horse and sustained serious injuries of the head and eye.——Dr. Edward E. Reisman has been made house surgeon of the Nashville City Hospital, vice R. W. Grizzard, Jr., whose term has expired.——Dr. Samuel F. Casenburg, Knoxville, has been appointed a member of the Board of Health, vice Dr. Edward H. Pierce, removed from the city.——Dr. Henry Berlin has been elected chief of staff of Erlanger Hospital, Chattanooga, vice Dr. Thomas E. Abernathy, and Dr. J. Jefferson Gee has been reappointed secretary.

VIRGINIA.

Smallpox.—Smallpox, which has prevailed in Caroline County since last October, during which time about 600 cases were reported, is said to have broken out afresh. Four houses in Bowling Green are under quarantine.

Massive Dosage of Quinin.—The article with this title, abstracted in THE JOURNAL, April 18, was wrongly ascribed to Dr. R. L. Payne, Norfolk. It should have been credited to his son, Dr. R. L. Payne, Jr., of the same place.

Cocain Traffic.—Richard Morris and wife, colored individuals of Richmond, were arrested while selling cocain, April 5. On the male prisoner was found a letter from a firm of manufacturing chemists in New York, stating that 50 ounces of cocain had been sent to the prisoner, March 2.

Hospital Notes.—Dr. George Ben Johnston, Richmond, has purchased a house at the corner of Sixth and Franklin Streets, and will remodel the building and convert it into a private surgical hospital.——King's Mountain Memorial Hospital Association has been chartered under the laws of the state of Virginia.

Infectious Diseases.—During March, 177 cases of infectious diseases were reported to the health department of Richmond, divided as follows: Typhoid fever, 23 cases, with 2 deaths; diphtheria, 10 cases; scarlet fever, 6 cases; smallpox, 1 case; measles, 78 cases, with 1 death; chickenpox, 32 cases; mumps, 9 cases, and whooping cough, 18 cases, with 2 deaths.

March Mortality.—During March there were reported in Richmond 223 deaths, almost equally divided between white and colored. This is equivalent to an annual death rate of 23.08 per 1,000, the death rate for whites being 17.99 and for colored 31.89. Chief among death causes were: Pneumonia, 31; tuberculosis, 18; cerebrospinal meningitis, 17; heart diseases, 16, and nephritis, 13.

Personal.—Dr. Charles M. Hazen has succeeded Dr. Ennion G. Williams in the department of *x*-ray therapeutics in the Memorial Hospital, Richmond.——Dr. Charles R. Grandy, Norfolk, has been appointed a member of the State Board of Health.——Dr. Richard C. Hume has succeeded Dr. Emory H. Connelly, resigned, as first assistant physician of the Central State Hospital, Petersburg, and Dr. Jarrett has been promoted to second assistant physician.

WASHINGTON.

Plague Work to Continue.—Dr. Frank S. Bourns, special officer in charge of plague work in Seattle, states that it will be necessary to keep up the work for at least two years, at an estimated cost of $3,100 a month.

Upholds State Board.—Dr. James G. Stewart, Seattle, whose license to practice medicine and surgery was revoked by the State Board of Medical Examiners in July, 1906, is said to have failed to block the filing and carrying out of the order of revocation in the Supreme Court.

Physician Wins Suit.—In the case of Mrs. S. M. Preston, who sued Dr. J. S. Kloeber, Green River Hot Springs, for damages alleged to have been received by carelessness of the employés by allowing her to drop while carrying her down the steps of the sanitarium, the jury returned a verdict in favor of the defendant.

Communicable Diseases.—During the winter Wenatchee has had about 200 cases of smallpox, without fatality. The last patient was removed from quarantine April 1.——Several cases of smallpox have appeared at Union Flat, near Endicott, and the school of District 75 has been closed.——Othello reports 4 new cases of diphtheria.

Personal.—Dr. James H. Lyons, library commissioner of Seattle, has resigned.——Dr. Edwin P. French, Lima, was seriously injured in a runaway accident recently.——Dr. Arthur B. Cook, Colville, has been re-elected a member of the local school board.——Dr. Dennis E. Biggs, Bellingham, has gone to New York for postgraduate study.——Dr. Alfred J. Helton, North Yakima, has been appointed health officer, vice Dr. Thomas Tetreau.——Dr. Joseph I. Kaulback, Edwall, has gone to Europe.—Dr. Frank M. Carroll, Seattle, has been appointed lieutenant and assistant surgeon in the National Guard.——Dr. Nelson G. Blacock, Walla Walla, who has been ill in hospital, is convalescent.——Dr. Frank S. Bourns has been

appointed chief of the sanitation department, and Dr. John Hunt assistant health commissioner of Seattle.——Dr. Harry C. Watkins, Hoquiam, has been appointed a member of the State Board of Medical Examiners, vice Dr. Charles S. Kalb, South Bend.

WEST VIRGINIA.

Physician Assaulted.—Dr. Robert M. McGuffin, Bramwell, was waylaid and assaulted, at Welch, April 14, and is reported to have been seriously injured.

Epidemic Diseases.—During the first two weeks of March, 8 deaths from cerebrospinal meningitis were reported in Huntington.——Scarlet fever is reported to be epidemic at Island. ——Measles has broken out in Riverdale.

Must Provide Cuspidors.—The State Board of Health on April 14 promulgated an order providing that railroads and street-car lines shall provide cuspidors for each coach and that cuspidors shall be provided in all theaters.

Medical Library.—A movement is now on foot among physicians of Wheeling and the members of the Wheeling Medical Library Association to secure a central location in the city for a reading room. The library now contains about 4,000 volumes and receives about fifty periodicals.

Society Meetings.—At the annual meeting of the Marshall County Medical Society, held in Moundsville, April 9, the following officers were elected: President, Dr. Rezin W. Hall, Moundsville; vice-president, Dr. James J. Duffy, Rosby's Rock; secretary, Dr. Ora F. Covert, Moundsville; treasurer, Dr. John W. Rickey, Moundsville; censor, Dr. W. DeWitt Stewart, Moundsville, and delegate to the state society, Dr. W. P. Bonar, Wheeling.

WISCONSIN.

Druggist Fined.—Of three druggists of Oshkosh, arraigned in court, April 2, on the charge of having dispensed adulterated drugs, one pleaded guilty and paid a fine of $25 and costs; the other two pleaded not guilty and were held for trial. The warrant in each case was obtained by the inspector of the State Dairy and Food Commission and charged the druggists with selling camphor below the standard.

GENERAL.

Medical Editors Meet.—The annual meeting of the American Medical Editors' Association will be held at the Auditorium Hotel, Chicago, May 30 to June 1.

Laryngologists to Meet.—The thirtieth annual congress of the American Laryngological Association will be held in the Windsor Hotel, Montreal, May 11, 12 and 13, under the presidency of Dr. Herbert S. Birkett, Montreal. On the first afternoon there will be a symposium on "Recurrent and Abductor Paralysis of the Larynx."

Academy of Medicine Meeting.—At the thirty-third annual meeting of the American Academy of Medicine, to be held at the Lexington Hotel, Chicago, May 30 and June 1, a number of important reports on medical sociology are to be made. The symposium for the year is on "The Place of Women in the Modern Business World as Affecting Home Life Through Marital Relation, Health, Morality and the Future of the Race."

American Medical Association Outing Club.—This club has arranged to take a nine days' tour to Battle Creek, Detroit and Mount Clemens at the close of the Association session. Members of the American Medical Association and their friends are invited to join, and tickets covering all necessary expenses will be issued. For any further information regarding details of the trip write to Dr. Edward R. Campbell, Bellows Falls, Vt.

Notice to Tulane Alumni.—It is important that all graduates of Tulane University, who intend to be present at the meeting of the American Medical Association, Chicago, will write at once to Dr. Hugh B. Williams, 100 State Street, for information concerning the gathering of the Alumni, June 2. The headquarters for Tulane will be at the Auditorium Hotel and the alumni are urged to call there immediately on arrival for information.

Pathologists and Bacteriologists.—At the eighth annual meeting of the American Association of Pathologists and Bacteriologists, held in Ann Arbor, Mich., April 17, a committee was appointed to assist in the raising of a relief fund for the widow of the late Major Carroll, U. S. Army, and of Dr. Lazear, U. S. Army. The following officers were elected: President, Dr. Harold C. Ernst, Harvard University, Boston; vice-president, Dr. Philip H. Hiss, Columbia University, New York City; secretary, Dr. Frank B. Mallory, Harvard University, Boston, and treasurer, Dr. Herbert W. Williams, University of Buffalo, N. Y.

Seaman Prize.—The American Institute of Social Service announces that a prize has been offered by Dr. Louis Livingston Seaman, New York City, of $100, for the best essay on the "Economic Waste Due to Occupational Diseases." All essays must be sent in not later than June 15 to the director of Museum at the Institute, 231 West Thirty-ninth street, New York City. The essays must not contain more than 5,000 words, and must be signed by a *nom de plume*, but the real name and address must be sent in a sealed envelope to the director of the museum.

Pure Water Board.—The mutual organization of Chicago and neighboring cities to promote the further purification of Lake Michigan as a water supply, was completed at a meeting, held in Chicago, April 18, at which Dr. William A. Evans, health commissioner of Chicago, was elected president; Prof. Edward Bartow of the University of Illinois, Urbana, secretary; Dr. Frank W. Shumway, Lansing, secretary of the State Board of Health of Michigan, treasurer, and Drs. William A. Evans and Perry Schurtz, Grand Rapids, Mich., and Mr. C. D. Hill of the Chicago Board of Local Improvements, with other members to be chosen later, executive committee.

FOREIGN.

Exclusion of Immigrants with Trachoma from Mexico.—Strict regulations are now being enforced at all the frontier towns and ports of entry of Mexico to detect and turn back all immigrants with signs of trachoma. The *Anales de Oftalmologia* hails this as a much needed innovation, as conditions among the poorer classes there offer peculiarly favorable soil for the spread of the disease if it once gains a foothold.

Professional Secrecy Versus the Public Welfare.—A provincial medical court of honor in Prussia recently fined a physician $12.50 because he had denounced to the local medical school inspector in his town a certain married teacher who had recently infected with syphilis a young woman who applied to the physician for treatment. On his demand she revealed the name of the man who had infected her. The young woman lived with her sister, a midwife with several children, and the midwife was attending the physician's wife at the time. On account of the danger to the school children and the other circumstances the young physician felt justified in disregarding the obligation to professional secrecy. Appeal to the higher tribunal of honor resulted in a confirmation of this view, the physician being acquitted. The decision stated that the collision of duties under these circumstances justified his action.

Medical Examination of Applicants for Positions.—Certain factories, etc., in Europe insist on a medical examination of applicants for positions. When one such applicant at Liège, Belgium, was recently rejected by the medical examiner, he assaulted the latter and threatened to kill him. The workman was arrested and severely punished, but the *Gazette Méd. Belge* comments on the case that the system is wrong which throws the burden of rejection on the medical examiner. The *Gazette* suggests that the candidate should be admitted to the factory on the understanding that his professional skill and physical qualifications attain a certain standard. After a certain interval, during which his skill is tested and he is examined by the company's physician, the candidate is told that he is definitely accepted or rejected, no details being imparted in respect to rejection, whether it is based on professional, moral or physical grounds. This shields the physician and professional secrecy while the desired purpose is attained, namely, to weed out those predisposed to injury in the factory or liable to contaminate others.

Conditions for Competition for the International Riberi Prize.—This prize of $4,000 is awarded every five years by the Academy of Medicine at Turin, Italy, for the best work or discovery made in the medical sciences during the five-year interval and entered to compete for the prize. The works must be in the hands of the secretary of the Academy by Dec. 31, 1911, to compete for the prize for the current period, 1907-1911. They must be written in French, Italian or Latin, and have been published or announced since 1907. The prize for the five-year period just ended has recently been awarded to Prof. B. Gosio of Turin for his discovery of the biologic reaction—the characteristic growth of mold fungi—on substances containing arsenic, tellurium or selenium, and its practical application. The test for arsenic by the growth of the *Penicillium glaucum* is in current use in laboratory work, and is said to surpass in delicacy and reliability any chemical test known to date. His work on the "Bioreactions of Arsenic Tellurium and Selenium" was published at Rome in 1906. Eleven works were

received in competition for the prize, including four from persons outside of Italy. The Riberi prize for the preceding five-year period was awarded to Golgi.

Final Outcome of Damage Suit Against Munich Medical Weekly.—Last year the *Münch. med. Wochenschrift* was sued for alleged slander by a physician who has allied himself with a well-known "nature faker." Our exchange commented on the way in which this physician, Dr. H. Fischer, has fallen "step by step" from good professional standing to be the "pitiable hireling of a quack." The suit was mentioned in these columns Dec. 14, 1907, page 2016. The Munich court fined the defendant 100 marks (about $25) and costs, but the court of last resort has reduced the fine to 30 marks (about $7.50) and divided the costs of the suit between the parties. The evidence admitted showed that Fischer wrote medical write-ups for pay, that his book and his play were gross denunciations of "orthodox medicine," and that he served as assistant to Mistelsky, a notorious Berlin charlatan, and advertised in quack style. The court stated that these facts placed in a milder light the counter attacks of the defendant in his position as representative of the medical profession. Our exchange regards this verdict as a complete victory; the judgment passed on Fischer by the court harmonizes with the condemnation of Fischer on several occasions by the Medical Tribunal of Honor. A Munich daily paper wrote up the first suit with sharp criticism of Fischer and Mistelsky, and they also sued this paper for slander. This suit, which was tried at Berlin, has also resulted in a denunciation of Fischer by the judge, although the technicalities required the imposition of a nominal fine. The full text of the article in the *Münchener Neuesten Nachrichten*, the daily involved, is given in the *Münch. med. Wochenschrift*, March 31, which also contains the full report of its own appeal suit, and a communication from a saddler at Berlin describing his experiences when he consulted the Fischer-Mistelsky combination for furunculosis.

LONDON LETTER.

(From Our Regular Correspondent.)

LONDON, April 11, 1908.

Sleeping Sickness Bureau to Be Appointed by the British Government.

In a previous letter, the failure of the International Conference on Sleeping Sickness, which recently met in London to agree to the establishment of a central bureau in London for collection of information with regard to the disease, has been reported. The British government has now decided to take independent action by establishing a National Sleeping Sickness Bureau with headquarters in London. It will be maintained by a strong committee. Annual grants will be made to it by the Imperial and Sudanese governments. To combat sleeping sickness Great Britain and Germany are concluding a convention on the subject of joint measures for the prevention of the malady in Uganda and German East Africa.

The Fight Against the Common House Fly.

The part played by the common house fly in the propagation of disease has attracted much attention. The advisory committee for the tropical diseases research fund in its report for 1907, which has just been published, describes an investigation by Dr. Robert Newstead of the Liverpool School of Tropical Medicine into the life history of the common fly with a view to devising measures to prevent its increase. Mr. Newstead found that the use of disinfectants does not prevent flies from increasing in refuse receptacles, but the presence of fowls (not ducks or geese) to a marked extent does.

Tropical Disease Research.

A government report of the advisory committee for the Tropical Disease Research Fund, which has just been issued, shows that the revenue for the last year was made up by contributions from the imperial government ($2,500), the Indian government ($2,500), the Rhodes trustees ($1,000), and the colonial governments ($9,000), making a total of $15,000. The expenditure included grants as follows: The Liverpool School of Tropical Medicine, $2,500; the London School of Tropical Medicine, $5,000; the University of London, $3,750, and Cambridge University, $500. The Liverpool grant was employed for the payment of a lecturer in economic entomology and parasitology. A further grant has ben applied for and the advisory committee has agreed to allot $2,500 extra to the school, to be applied to work in connection with sleeping sickness. A further sum of $5,000 has been granted the London school for the establishment of a post of entomology. This is subject to the condition that the entomologist shall make a collection of noxious insects of the colonies—a separate collection for each colony—the collections to be kept in readiness for reference by colonial officials or physicians. The secretary of state asked the committee for advice as to the existing condition of sleeping sickness in Uganda. The committee decided that the measure to be adopted should include 1. Segregation of all persons infected with tryanosomes in camps situated in places free from *Glossina*. 2. Removal of the apparently healthy from fly-infested areas to places where it is believed that no fly exists. 3. The clearing of such bush as would afford shelter for the flies at all fords, ferries, landing places and sources of water supply, such cleared areas to be kept free of bush and cultivated with low-growing crops which could not afford shelter for the fly. Steps are now being taken to carry these recommendations into effect.

A School for Mothers.

In one of the poorer quarters of London, St. Pancreas, an interesting experiment is being made in the education of poor mothers in the feeding and rearing of children. A school has been established which has a big shop window filled with pictures of rickety children and an invitation displayed to passing mothers to come in and learn how to keep their babies from becoming bowlegged. A cookery teacher from the London County Council attends and gives demonstrations in the preparation of cheap nutritious meals. An attempt is also made to get the father interested in the welfare of the mother and the child. Fathers are invited to the school and after a cup of coffee and a pipe they receive "talks" on hygiene. It is intended to open a milk depot for the use of mothers who can not suckle their babies. Prizes are given to the mothers who attend regularly and follow the advice given. The mothers pay a penny a fortnight for the classes and the weighing of their babies. It is claimed that the school has already done something to lessen the infant mortality of the district.

The Care of Children's Teeth; Scheme to Provide a Dental Hospital for the Young in London.

A scheme is under consideration for providing a dental hospital for school children in London. Dr. James Kerr, medical officer to the education committee of the London County Council, in his last report states that the need for such an institution is great. Out of 700 children examined at the time of admission to school, only 20 had no obvious decay of teeth; many had only a few stumps, and others only two or three teeth. At present there is not hospital accommodation in London for more than 200 cases weekly, but at least ten times that accommodation would be necessary for even part of the children whom school dentists would select as requiring it.

The United Hospitals Conference.

The third United Kingdom Hospital Conference has been held under the chairmanship of Mr. Charles Lupton, chairman of the General Infirmary, Leeds. It was attended by lay representatives of the governing bodies and members of the medical staffs of most of the hospitals in the United Kingdom. Discussions had been arranged on many important topics in connection with hospital management, eligibility for hospital treatment, gratuitous treatment in compensation cases, payment for food and medicines, hospital accounts, the prevention of tuberculosis, etc. On the question of eligibility for hospital treatment Mr. H. C. Gosnell representing the city of London Lying-in hospital, argued that poverty or want of means should not be considered the only test in determining a patient's inability to pay for medical treatment. Among the middle classes there are a number of persons who wear black coats and show no external signs of poverty yet who are equally as deserving of the benefits of charitable institutions as the laboring classes. As an amendment to the proposal discussed at the last conference, "That inability to pay should be the consideration for the admission of all patients;" he moved: "That in determining the suitability of patients for admission into hospitals, particularly with reference to their inability to pay for adequate treatment, poverty or want of means should not be deemed the only test, but persons should be deemed eligible whether they belonged to what are termed the working classes or not, if owing to their obligations being disproportionate to their means, they are unable to pay for the services of a doctor." This amendment was lost. Considerable discussion took place on the motion of Mr. Sydney Holland, chairman of the London hospital: "That where they can afford to do so, hospital patients ought to be asked to pay for the food, medicine and bandages supplied to them." He said that all hospitals, and especially London hospitals, are in a serious financial position. Hospital authorities are making a great mistake in not asking patients whether they can afford to contribute toward

treatment. It is economically unsound to give everything to everybody for nothing, whether the individuals can afford to pay or not. At the London hospital last year 157,000 persons paid sums representing $10,000 without any pressure being put on them. The charitable work of hospitals should be restricted to providing for the sick poor that help, which they can not afford for themselves. Mr. W. Carnt, Manchester Royal Infirmary, said that a large proportion of the patients in this institution paid sums ranging from 50 cents to $1.50 weekly. By this means from $5,000 to $6,000 is added to the income yearly. Dr. Henry Davy, president of the British Medical Association, opposed the proposition and stated that the question of payment raised that of the whole charitable system of the country. He prefers the German system of municipal hospitals. Dr. G. A. Heron, City of London Hospital for Diseases of the Chest, said that the sooner reliance on state support of hospitals comes the better. This system of payment, small though it is, strikes at the root of true charity. There is the greatest difficulty in separating those who are necessitous from those who are not. He knows of people in receipt of $4,000 per annum who habitually used the out-patient department of hospitals. Mr. R. G. Paterson of Glasgow Eye Infirmary asserted that the working classes who supported that institution looked on treatment as a right and that to ask for payment would shut off a large portion of the income. Mr. Sydney Holland in reply said that his hospital had never lost a farthing of support in consequence of making a charge.

The Housing of the Working Classes.

The problem of better and more sanitary housing for the working classes has long exercised governments, sanitarians and philanthropists. Mr. John Burns, president of the local government board, has introduced a most drastic measure into parliament. Hitherto legislation on this question has been of a piecemeal and permissive character, and the accommodation available for the working classes in slum quarters of towns is often lamentably insanitary. Mr. Burns' bill provides for the town planning schemes by which the creation of insanitary and unhealthy areas shall in future be prevented. It increases the powers of local authorities, compels them to exercise their powers, facilitates the financial operations necessitated by its provisions, compensates tenants as well as house owners who are dispossessed, and taxes for the benefit of the community those property owners who profit by the unearned increment resulting from the betterment of their estate by public improvements. The local authority is authorized to prepare a town-planning scheme in relation to any land they believe likely to be used for business purposes. It is also given compulsory powers of purchase and demolition. If the local authority proved reluctant to do its duty—if, as sometimes happens, it is dominated by house farmers, jerry builders or speculators—the local government board reserves to itself the power of compelling it to obey the law.

VIENNA LETTER.

(From Our Regular Correspondent.)

VIENNA, April 15, 1908.

Regulation of Dentistry.

By a bill which will go in force in a few weeks the long quarrel between the dental surgeons and the non-medical dentists will be settled. As there was no legal definition of dentistry, numerous dentists cropped up within the last fifteen years who had never had any anatomic teaching, and who not only made artificial teeth for patients, but also extracted teeth and filled carious teeth. The medical profession was unable to grapple with the situation because the law was inadequate. In fact, the position had become so bad for the dental surgeons that the dentists even disputed the doctor's right to make artificial teeth and to fit them in the mouths of patients. According to them, nothing but purely surgical dentistry—extraction and operations on the alveolar process—should be the domain of the dental surgeons. By the united efforts of the profession, who saw the danger of that sort of argument, the attack was repelled, and an arrangement was agreed on stipulating that all present licenses of dentists should remain in force, allowing them, besides making artificial teeth, also to fill carious teeth; while all those who are not yet licensed, qualified dentists will be licensed within three years. After that time only medical men will be able to obtain license to practice dentistry.

Outbreak of Ergotism Near Vienna.

An outbreak of acute ergotism has occurred a few miles from Vienna. So far there have been 27 cases and 3 deaths. The cause of the outbreak has been traced to a carload of Hungarian flour which had been conveyed thither on the Danube. It is many years since such an epidemic occurred before, as strict precautions are taken by the authorities to prevent such outbreaks. Strenuous efforts are being made to ascertain whether any of the infected flour has found its way into the city of Vienna.

The Twenty-fifth German Congress on Internal Medicine.

The twenty-fifth German Congress on Internal Medicine was held in Vienna from April 6 to 10, inclusive, and proved a very successful meeting, both scientifically and socially. The number of physicians present—mostly from German-speaking countries—was upward of 500, a record attendance. The congress was welcomed both by the government and the city, and held its meetings in the ceremony hall of the university. The minister of education delivered an address to the gathering, and in it called attention to the newly erected hospital and the advantages it will offer for scientific research. The burgermeister of the city, in his welcoming address, invited all the attending members to a banquet that was given by the municipality.

The transactions of the congress were arranged on a new plan; certain subjects were selected, on each of which introductory addresses or reports were delivered by two eminent physicians, and the discussion, as well as papers referring to it, were given the same day. Thus Professors Rosthorn (Heidelberg) and Lenhartz (Hamburg) each gave a report, on the same day, on "The Correlation of the Female Sexual Organs to Internal Diseases." While Rosthorn gave more attention to the physiologic and anatomic side of the question, Lenhartz dealt more with therapeutic measures. An interesting paper by Tuszkai (Marienbad) dealt with "The Heart in Pregnancy," in which he expressed the opinion that the danger of cardiac disease being complicated by pregnancy had been greatly exaggerated. The question of the existence of "Sexual Asthma" was discussed by Dr. Haufbauer (Vienna), who asserted its presence, although in such cases no crystals can be found in the sputum and there are no bronchitic symptoms. Professor Neisser (Breslau) read a paper on "The Present Status of the Pathology and Therapy of Syphilis," in which he discussed the three important discoveries of recent times regarding this disease: Schaudinn's observations on the *Spirocheta pallida*, Metchnikoff's experiments in monkey inoculation and Wassermann's method of sero-diagnosis. The question of the specific properties of the syphilitic serum was discussed by many physicians, among them being Professors Spiegler, Finger, Ehrmann and Porges. In the afternoon of the second day a number of papers referring to other branches of internal medicine were read and discussed. There was an interesting symposium on "The Heart," in which several competent observers gave their opinions as to the possibility of producing acute insufficiency by overexertion. Professor Schott (Nauheim) described the results of his experiments with wrestlers, in which he has shown that when exertion is pressed to the point where dyspnea and palpitation occur, the heart becomes acutely dilated even though before such exertion the heart muscle was perfectly normal. Dr. Wachenfeld spoke on the treatment of the diseased heart. He considers a rest cure for the heart one of the most important therapeutic measures.

Dr. Herz discussed the danger of impairment of the heart's action by lack of space for the organ due either to malformation of the internal organs or to incorrect posture on the part of the patient. The phonoscope, a new instrument for the examination of the heart, was demonstrated by its inventors, Drs. Weiss and Joachim (Königsberg). The third and last report was made by Professor Schmidt on the subject of "Diseases of the Stomach and Intestines." The paper dealt chiefly with modern clinical methods of examination of the functions of the alimentary canal. Dr. Schütz then read a paper on "The Examination of the Stomach of Infants." A series of papers was read on the relation between the "internal secretion" glands (pancreas, thyroid, adrenals), and in a joint paper by Drs. Falta, Eppinger and Ruedinger it was asserted that the action of each of the three glands mentioned is regulated to a certain degree by the other two, and that a very close relationship exists between them. Among other notable papers read were two dealing with sciatica. One by Dr. Bum described his method of treatment by injection of sterile salt solution into the nerve sheath; the other, by Dr. Erben, dealt mainly with methods of diagnosis. A commercial exhibit of pharmaceutical and surgical products was given at the time the congress was in session. The twenty-sixth congress will convene in Wiesbaden.

Therapeutics

[It is the purpose of this department to outline an up-to-date management of disease, to suggest scientific treatment for diseased conditions, and to present prescriptions that are simple, useful and palatable. Prescriptions are written in both the metric and apothecaries' systems, but the amounts of the ingredients are NOT exact translations of one system into the other, but quantities convenient for pharmacist and physician. It should be understood that solids are weighed in grams or fractions of grams, while liquids are measured in cubic centimeters; that a teaspoon holds five cubic centimeters, i. e., more than a fluid dram, hence a 100 cubic centimeter preparation will contain twenty doses.]

Euonymus.

Euonymus or wahoo is the bark of the root of a shrub (sometimes called "spindle tree") of the eastern United States. It contains a bitter resin called euonymin, a crystalline glucoside termed atropurpurin, and citric, malic and tartaric acids. The bitter principle euonymin is supposed to cause the laxative or purgative action of wahoo. Euonymus is a mild laxative, somewhat resembling podophyllum and rhubarb, only its action is weaker. It increases the secretion of the mucous membrane of the bowel, does not ordinarily cause griping, and as it acts but slowly, for laxative effects should be given from twelve to fifteen hours before its action is desired. It has been claimed to have a slight tonic action on the circulation, slight expectorant and diuretic action, and to be a stomachic. None of these activities is of any importance. Some of its active principles are excreted by the kidneys, but probably it is mostly excreted by the intestines.

It is a useful drug in chronic constipation, perhaps especially when the constipation is complicated by dyspepsia and liver insufficiency.

The official preparations are:

EXTRACTUM EUONYMI, which really represents the euonymin of the drug. The dose is about 0.10 gram, or 2 grains.

FLUIDEXTRACTUM EUONYMI, the dose of which is 0.5 c.c., or 8 minims.

This drug is best used in combination, and may be combined with any other laxative to increase its action, as:

℞.	gm.		
Aloini	.20		gr. iii
Extracti euonymi	1	or	gr. xv
Extracti belladonnæ foliorum	.20		gr. iii

M. et fac pilulas 20.

Sig.: One pill after supper.

Or:

℞.	gm.		
Aloini	.10		gr. iss
Ipecacuanhæ	.20	or	gr. iii
Extracti euonymi	1		gr. xv
Resinæ podophylli	.06		gr. i

M. et fac pilulas 20.

Sig.: One pill after supper.

Or:

℞.	gm.		
Euonymini	.20		gr. iii
Extracti rhamni purshianæ	3		gr. xlv
Extracti belladonnæ foliorum	.15	or	gr. iiss
Extracti nucis vomicæ	.20		
Oleoresinæ capsici	.20		āā, gr. iii

M. et fac pilulas 20.

Sig.: One pill after supper.

Gonorrhea.

Mr. Reginald Harrison (*Lancet*, Feb. 8, 1908), reports a study of the condition of the urine in patients suffering from chronic gonorrhea; he seems to have demonstrated that sometimes, even without local treatment, the discharge will improve and the patient recover by the administration of alkalies. He attributes this to the production of phosphaturia, and does not believe that the improvement is due to the alkalinity of the urine, but to the phosphaturia.

Of course, it has been long known that acute urethritis is improved by the administration of alkalies; in other words, by rendering the urine neutral or alkaline. The best alkalinizers of the urine are the well-known potassium salts, the acetate, bicarbonate and citrate, and every physician has his favorite combination of these drugs. Any one of these salts is efficient if given in sufficient doses, though many physicians think a combination is better. The acetate is perhaps the most active alkali of the three, the bicarbonate the most disagreeable to take, and the citrate the pleasantest.

The urine is more readily rendered alkaline by the administration of the alkali directly after a meal, at which time the urine is the nearest to neutral on account of the production of hydrochloric acid in the stomach. The amount of an alkali that should be administered can not be determined except by examination of the urine; in other words, if the object is to render the urine alkaline, enough should be given to cause that condition.

Any of the following combinations are satisfactory:

℞.	gm. or c.c.		
Potassii citratis	40	or	3ix
Aquæ	200		fl℥vi

M. et Sig.: Two teaspoonfuls, in water, three times a day, after meals.

[The water may be flavored with an aromatic, as peppermint, spearmint, wintergreen, or cinnamon, if desired.]

It will often be necessary to administer the above dose more frequently than three times a day. Also, as an adjunct it is sometimes advisable to have the patient drink several glasses of artificial or natural vichy, or some other alkaline water, during the day.

Or:

℞.	gm. or c.c.		
Potassii acetatis	10		
Potassii bicarbonatis	10	or	āā, 3iiss
Potassii citratis	20		3v
Aquæ cinnamomi	200		fl℥vii

M. et Sig.: Two teaspoonfuls, in water, three times a day, after meals.

Alkalies should not be pushed long if there is considerable mucus coming from the bladder, or if there is bladder irritability, for it must be remembered that the bladder mucous membrane is accustomed to an acid secretion, and a continuous alkaline urine sooner or later causes irritability of the neck of the bladder, frequent micturition and even tenesmus. Also, if the urine becomes at all ammoniacal, the irritation of the bladder is made worse by alkalies, and the likelihood of deposits in the bladder is increased.

Ulcers of the Leg.

Dr. Julius T. Rose, Brooklyn, N. Y., in the *Dietetic and Hygienic Gazette*, February, 1908, offers good advice for the treatment of this troublesome condition. He divides his management under several headings.

1. He believes that most patients need a general tonic treatment, as:

℞.	gm.		
Strychninæ sulphatis	.04		gr. ⅔
Quininæ sulphatis	2	or	
Ferri reducti	2		āā, gr. xxx

M. et fac capsulas 20.

Sig.: One capsule, three times a day, after meals.

Or:

℞.	c.c.		
Tincturæ nucis vomicæ	25	or	fl℥i

Sig.: Ten drops, in water, three times a day, before meals.

Constipation, if present, should be relieved by a compound aloin tablet, or cascara sagrada, or by the compound rhubarb pill. The food should be properly selected and nutritious, and fresh air should be arranged for house patients, as anything that improves the general nutrition will, of course, aid in the healing of the ulcers. If there is a specific history, of course mercury and potassium iodid are indicated.

2. If there is acute inflammation in and around the ulcer, he applies wet dressings, as:

℞.	gm. or c.c.		
Zinci sulphatis	4		3i
Tincturæ lavandulæ compositæ	60	or	fl3ii
Aquæ ad	1000	ad	Oii

M. et Sig.: Use externally.

Or:

Ichthyolis	25	or	fl3vi
Aquæ ad	500	ad	Oi

M. et Sig.: Use externally.

Either of these solutions should be applied on a sufficient amount of gauze to keep the leg moist from the ankle to the knee, and sufficiently often to keep the gauze wet. He would also soak the leg two or three times a day in water as hot as can be borne, and after two days of such treatment the inflammation generally subsides. Of course he presumably presupposes that the leg should be kept elevated while such inflammation is in evidence.

3. If there is no inflammation around the ulcers, he shaves the leg from foot to knee, to prepare it for the application of adhesive strappings, and then sprinkles powdered naphthalene crystals over the ulcers and covers this with a layer of diachylon ointment, using both generously.

℞.	gm.		
Naphthaleni	25	or	3i

Sig.: Use externally, as directed.

℞.	gm.		
Unguenti diachylon	50	or	3ii

Sig.: Use externally, as directed.

He next straps the leg from the foot to well above the calf with zinc oxid adhesive plaster, each strap ¾ of an inch wide and nearly long enough to go twice around the leg. He applies the straps as follows: "Hold a strap back of the leg (the foot being supported on a chair or stool), an end in each hand. Bring it forward till the middle adheres to the back of the ankle, then, estimating the amount of tension required, lay one end in an upward direction obliquely across the front of the leg, and then lay the other, crossing the first somewhat below a right angle. Apply the first one farthest down. Let each succeeding strip overlap the preceding one about one-third. Keep up the same amount of tension in laying each strip so that the pressure may be uniform. There must be no folds or bunches, as they might cause the skin under them to blister or ulcerate. Apply over this a muslin or gauze bandage from toes to knee." He allows this dressing to remain for a week or ten days, and finds after such a period that improvement in the ulcerations is marked. If the granulations do not look sufficiently healthy, he then applies boric acid ointment and again straps for another week.

℞.	gm.		
Unguenti acidi borici	25	or	3i

Sig.: Use externally.

4. He then proceeds to the next stage in the treatment, viz., he flushes off the granulating ulcers with a solution of salt (a teaspoonful of salt to a pint of boiling water) and then applies skin grafts which he takes from the patient's leg not far distant from the ulcers. An anesthetic is not needed, as he uses a very sharp razor and takes a very thin, little more than epidermal, skin graft. He first places a sharp razor and a small probe in a 5 per cent. phenol solution for about fifteen minutes, then transfers them to a salt solution, and they are ready for use. He cleans the skin from which the grafts are to be obtained with soap and hot water, then flushes with salt solution. The operator next "wraps the left thumb with a single layer of gauze to make it adhere to the skin, then stretches the skin lengthwise of the leg, after wetting it with salt solution." With the razor held lightly as for shaving, "a very thin, translucent graft is cut with a quick sawing motion, using absolutely no pressure." The skin graft will lie on the blade of the razor. It is then immediately transferred to the granulations, which are wet with the salt solution, the probe aiding in its transference to the exact spot desired. After the grafts are all in place, as many as are deemed necessary, and they would best overlap one another and the edges of the ulceration, the air bubbles are pressed out or pricked with a sterile needle. Silver foil or silver leaf is next placed over the graft-covered ulcers, and also over the parts from which the grafts have been taken. Then the leg is strapped as before, but from ankle to calf only, and the parts which overlie the ulcer should be smeared with boric acid ointment to keep them from adhering to the grafts when removing the dressing. This dressing should be left on for two weeks, at which time when the bandage is removed the ulcers will be found healed. However, the leg should be restrapped for a week or two, and then, if necessary, an elastic stocking worn or a bandage used.

Pharmacology

THE BROADER AIMS OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

TORALD SOLLMANN, M.D.

Member of the Council, Professor of Pharmacology and Materia Medica at the Medical Department of Western Reserve University.

CLEVELAND, OHIO.

(*Continued from page 1363.*)

VI. ARE THE COUNCIL'S RULES SUFFICIENTLY LENIENT?

The Council realized at its organization that absolute impartiality to all manufacturers and toward all products was essential to the success of the movement. The careful selection of its membership would seem to make it superfluous to throw up safeguards against dishonest partiality; but honest errors of judgment are apt to arise among even the most disinterested and best informed body of men. It was deemed wisest, therefore, to eliminate as far as possible the personal equation and to classify all products in accordance with rigid rules and rulings, established in advance, rather than to trust to the opinions and impressions of the moment. This resulted in the acceptance of the rules of the Council, which are, I take it, so well known as to need no discussion. Before being finally adopted, these rules were widely published for comment and criticism. After they had been in tentative operation for half a year, the Council arranged for a conference with the representatives of large manufacturing houses, for a personal discussion. The Council has been and still is ready to consider carefully any suggestions for the improvement or modification of these rules. As a result of such suggestions, originating within as well as without the Council, minor changes and additions have been made from time to time; but on the whole, the rules now in force are substantially those which were originally adopted. In other words, all the products which have been submitted at various times have been judged by substantially the same standard. The tendency of the minor changes has been in the direction of making the rules more specific, and on the whole, more rigid; and I believe this to be the correct tendency.

Commercial competition had encouraged certain laxities as to exaggerated therapeutic claims, want of originality, unwarrantable methods of advertising and of unscientific and misleading nomenclature. These practices were, when the Council began its work, so universal that products which originated under such conditions should not, in justice, be condemned too harshly, and this had to be recognized in the rules. As higher standards come to be more widely accepted, the Council's requirements also should be raised; and this not only in the interest of the medical profession, but also to protect the honest manufacturer against less scrupulous competitors.

Indeed, it is felt even now that the Council's standard for admission should be much higher in many respects, and measures looking to this end have been discussed repeatedly. It has been decided, however, that the products which were on the market when the rules were adopted, should be given a fair chance to be admitted under these rules. On the other hand, I feel that this opportunity should not be extended indefinitely, and I shall take another occasion to discuss whether or not the time to change has not already arrived.

Of two things I feel quite sure: The present rules are fully as lenient as they should be; compliance with them is quite feasible for every manufacturer. I have yet to hear a valid argument to the contrary.

The advertising pages of many medical journals, however, bear witness to the fact that there are still many, very many proprietary medicines on the market which have not been passed by the Council. The causes of this I shall consider in a later paper. At present, I wish to emphasize that the refusal of a product can not be blamed on any unreasonable severity of the rules; and that, if any revision is needed, it should be in the direction of higher instead of lower standards.

I had barely finished writing the above when I received the following letter through the secretary of the Council. It came so opportunely, and expresses so well my general views on these questions, that I have secured Dr. Brady's permission to publish it in full.

In THE JOURNAL of March 14, 1908, the Council publishes its acceptance of "Elixir Buchu, Juniper and Acetate Potassium, P.-M. Co." In the absence of any comments on the remedy I fail to understand why the Council has approved this mixture under "new" remedies. Since criticisms are asked for I would also mention certain other remedies that have been accepted by the Council, with the objection that their names are very suggestive, unscientific and savoring of quackery. As far as any personal experience with, or knowledge of, these remedies goes I am innocent. But if the "New and Non-Official Remedies" demand the consideration they deserve at the hands of the medical profession, would it not be well to censor the *names* of products, as well as other features, before accepting them even tentatively? I refer to such names as "Atoxyl," "Dentalone," "Diabetin," "Diuretin," "Laminoids Ferruginous (Nascent)," "Migrainin," "Purgatin," "Regulin," "Sextonal," "Vibutero," etc.—all of which are undesirable names and most of them suggestive to patients if prescribed.

Another class of remedies that the Council has approved seems superfluous and also slighting to the Pharmacopeia. These are "Cascara Evacuant," "Chologestin," "Elixir Buchu, Juniper and Acetate Potassium," "Elixir Saw Palmetto," "Emulsion Cloftlin," "Kasagra," "Maltzyme" (with this, that and the other), "Phenacetin," "Syrup Cannabis Comp.," "Tablets Acetphenetidin Comp.," "Tonic Hypophosphites," "Tonols," etc.

I am deeply grateful for the benefit I have derived from the great good the Council is doing. It seems unfortunate that so many physicians, even members of the American Medical Association, are still utterly in ignorance of the Council or its work.

I write this lengthy and tiresome "criticism" simply because I fear that some one more capable may neglect doing so. May you continue with the work of reform and please accept my best wishes for continued success.

WILLIAM BRADY, M.D.

I feel certain that every member of the Council agrees in a general way with the opinions of Dr. Brady. Does he also voice the sentiment of the profession at large? Thus far I have consistently supported the conservative opinion that the older products should be given ample opportunity for admission under the original rules; but I, for one, am ready to consider the question whether three years have not offered the "ample opportunity." If they have, and if the profession desires the further reforms indicated by Dr. Brady, then I feel assured that the Council is ready to take the next step. If the demand is sufficiently serious and extensive, I feel assured, also, that the manufacturers will be ready to cooperate. Pharmaceutical manufacturing is largely a business; and as such it will be ready to defer to the demands of its customers —the medical profession.

(To be continued.)

ERGOT.

Its Production and Collection in Russia.

An interesting account of the production and collection of ergot in Russia is given by D. A. Ruffmann and Thomas Maben in the *Pharmaceutical Journal*, London, Feb. 29, 1908. Ergot is not purposely cultivated, but occurs as a fungus (*Claviceps purpurea*) which attacks rye or other cereals. The fungus is spread by a small weevil which carries the spores from one ear of grain to another, thus infecting whole fields and districts. The fungus gradually develops, and by the month of June a long, black, triangular "horn" may be seen growing out of the ear of the rye (whence the old name *Secale cornutum*, horned rye), sometimes as many as ten horns being found in one ear. This horn is the sclerotium, or final stage, in the development of the fungus. Rainy districts and wet seasons are favorable for the development of ergot, and its size depends to some extent on the size of the ear in which it grows. The sowing of rye in Russia usually occurs in July and August and the harvesting in the following June and July.

Ergot is collected during the harvest time, being separated from the rye in threshing. After the ergot is separated it is dried in a fashion; but as the peasants have few facilities for artificial drying, it is usually simply air-dried, and often very imperfectly done at that. The consequence is that if the ergot is kept for some time by the peasants and small dealers, it frequently becomes coated with a mold, and it is then considered useless. By some means, however, these people comb it and treat it with oil, and then palm it off as the fresh crop. This accounts for the fact that much ergot, apparently sound, is, nevertheless, destitute of any therapeutic value.

POTENCY DEPENDS ON FRESHNESS.

While the quality of Russian ergot varies, it is generally admitted that it is better than that produced in other countries. Investigations show that much of the value of this drug depends on its freshness. As time goes on its pharmacologic action becomes weaker, and Grunfeld states that ergot when tested four months after it has been collected has considerably less activity than fresh ergot. After eight or nine months the therapeutic action is almost *nil*. In view of this the Russian Pharmacopeia demands that the Russian pharmacist should lay in a stock that will last for not more than one year, and it is also advised that the year's stock should not be ground at once, only as much being powdered as is required for making up a preparation that is to last for a short time, since ergot keeps longer and better in its original state. The Russian Pharmacopeia goes so far as to recommend the making up of ergot preparations as required.

THE PHYSIOLOGIC TEST.

In consequence of the inertness of many specimens of ergot it is necessary that its activity should be ascertained by physiologic experiment. By the effect on the cock's comb the physiologic activity of this drug can be ascertained. As a result of the researches of Houghton, physiologically tested

ergot preparations are available and these give all the characteristic pharmacologic reactions of sound ergot. Blood pressure is raised; peristalsis of the intestines is increased when intravenous injections are administered to dogs and rabbits; gangrene of peripheral parts occurs when the preparations are given to cocks, and expulsion of the contents of the uterus follows when they are administered subcutaneously or internally in proper doses to pregnant animals in various stages of gestation. This method of testing has been in use for the past ten years, experience having proved it to be more generally serviceable than that depending on a determination of the mammalian blood pressure.

Cooperation with the Council on the Part of Manufacturers.

The attitude of some of the pharmaceutical manufacturers toward the Council's work has been demonstrated recently in a gratifying way. In a recent issue of THE JOURNAL,[1] the German product pankreon was reported on unfavorably. Merck & Co., the American agents for the preparation, on being notified of the fact, replied to the Council as follows:

> As to pankreon, we regret that your findings should be at variance with the claims of the *Chemische Fabrik Rhenania* (the manufacturers of pankreon), and we have already written them to that effect, at the same time informing them that under the circumstances we feel compelled to give up the agency for pankreon.

If this position on the part of American agents for foreign pharmaceuticals is taken generally, and the signs for it are hopeful, many of these much lauded products will be eliminated.

As a further illustration of the commendable attitude taken by some of the pharmaceutical firms the following is *apropos:* Examination of a certain digitalis preparation, which had been submitted to the Council, caused the claims made for the product to be questioned, and the suggestion was made to the manufacturers that they investigate these claims further. This was promptly done, with the result that the firm wrote: "We have made very careful physiologic examinations of ——— and find that some of the claims which we made for it originally are not supported by the results of these studies . . . . and now we will withdraw it entirely from the market."

Such incidents as these should foster a spirit of optimism in those who are interested in honest products and scientific medicine.

Plagiarism and Paid Testimonials.

The indiscriminate praise of new articles introduced into therapeutics by means of fulsome write-ups of the "original article" type has long been a standing disgrace to medical journalism on both sides of the Atlantic. The evil is being fought in Germany by the organization of some of the more reputable medical journals and one of these, the *Berliner klinische Wochenschrift,* in its issue of March 23, 1908, unearths a ludicrous example demonstrating the worthlessness of such "literature."

The phraseology of the text and the clinical histories in an article appearing in *Heilkunde* on "visvit" had a familiar sound. Diligent search was rewarded by the discovery of the original text, which had been published in 1899 in the *Communications of Styrian Physicians,* as a contribution praising another preparation, "hygiama," and two of the clinical histories were found in another article devoted to the same preparation. The correspondence between the two articles is so complete as to exclude accident. The one is simply a reproduction of the other with the word "visvit" substituted for "hygiama." It must be said, however, that the progress of time had led to the enlargement of the original article in a few places so that the proprietors are able to recommend "visvit" for some things which were not thought of in praising "hygiama." It is noticeable also that while the clinical histories are the same, the age of the patient varies, he having grown ten years older before the second article was published. The names of the authors are withheld by our German contemporary, but parts of the two articles are printed in parallel columns, showing the almost exact identity of language in the two. Visvit is made by Arthur Horowitz, Berlin, manufacturer of arrhovin, pyrenol, etc.

1. April 18, 1908, 1281.

A Lack of Self-Respect.

H. Kohn has an article on "pseudomedical periodicals" in the *Berliner klinische Wochenschrift,* March 30, in which he calls attention anew to the evils of allowing one's name to be published as one of the collaborators or contributing an article to a pseudomedical journal which is in reality a "house journal" sailing under the flag of scientific literature. It is amazing, he adds, to see how readily men of prominence will contribute an article or allow their names to be published as collaborators on some newly founded medical journal, or one that is striving to enlarge its field, when the men floating the journal are personally unknown to them. These physicians would hesitate before giving a person with whom they have but a superficial acquaintance a letter of recommendation to a friend, and yet they give what amounts to the same thing to a journal published by a man of whom they know little or nothing. In the first case they injure only one person, while in the pseudomedical journal they may injure thousands who may act on their recommendation. Any man who respects himself is careful of his associates in public and he should be fully as careful as to his associates in the field of science. Before giving the use of one's name or contributing an article to a medical periodical, it is one's solemn duty, Kohn declares, to investigate the character of the editor and of the journal in view. In Germany a confidential appeal to the Association of the Medical Press will obtain for him the desired information. He adds that any one who would impute unworthy motives to the old and honorable German medical journals in their replies to such an inquiry is unworthy of notice. These medical journals voluntarily relinquish the income which they could have if they consented to accept the advertisements.

Correspondence

An Arraignment of Surgery.

PEKIN, ILL., April 12, 1908

To the Editor:—In THE JOURNAL, March 28, an article by Dr. Bayard Holmes appears, entitled "A Suggestive Plan for a Modern Hospital of Five Hundred Beds." In it I was surprised to read the following:

> Modern aggressive surgery has made the hospital into a hotel for the temporary care of the vivisected. All that the surgeon cares for is a room for his patient to occupy during the three or four weeks she is recovering from his incisions. She may then go home and get well or lead a life of invalidism, as it happens. To cure his patient and restore her to a life of usefulness and happiness is not the modern surgeon's conception of duty. He looks on the invalid as an incumbrance to his hospital, and all the essentials of recovery as unnecessary expense and space-consuming impedimenta.

This amazing arraignment of the surgeon, coming from a teacher of surgery and a surgeon of note himself, is about the most inconsistent and untrue statement that has ever been put into print.

The foregoing statements do not, and can not, apply to the surgeons of to-day, who not only exhaust every means in their power to accord to their patients the essentials of recovery, but who watch their patients indefinitely to see that their interests are taken care of and that they are, if not wholly, as nearly as possible restored to their former usefulness and happiness.

These remarks, therefore, have no existence in fact, and it must be concluded that Dr. Holmes speaks from his own experience and of his own methods of practice and conception of duty, as a surgeon, to his patients; for certainly this condition does not exist in the practices of other surgeons, for whom no sacrifice in the interests of their patients is too great.

Such ill-considered and unwise remarks, published in an influential medical journal, only give the yellow press and such cults as the antivivisectionists and Eddyites a chance to

construe and promulgate them as another confession of the incompetence and insincerity of our profession—thus undoing in large measure the great and unselfish work done by our profession for the good of humanity, and doing an inestimable amount of harm.

I think if Dr. Holmes means exactly what he says, he should never again teach or practice an art of which he thinks so little, but should be consistent and step down and out. If, however, he does not mean what he says and these statements are the result of careless preparation, which some parts of the article suggest, he should tender the profession an apology and set himself right as to the meaning really intended. However, I can hardly conceive that this is the case, and until Dr. Holmes explains his attitude I am left to conclude that he knowingly meant what he said.

I therefore take this method of refuting these statements, in the interests of surgery and that great army of surgeons, whose highest conception of duty is to operate only when necessary and to accord to their patients all "the essentials of recovery."

EDWIN A. WEIMER, M.D.

[COMMENT:—The statements that are criticised would not have been published had their import been realized. We are in accord with the criticisms of Dr. Weimer.—ED.]

The Cure of Stammering.

NEW YORK, April 23, 1908.

To the Editor:—A letter in THE JOURNAL, April 18, 1908, concerning my "melody cure" contains several statements about stammering that should be corrected.

That stammering "is congenital" is incorrect. Among the many hundred patients who pass through my speech clinic many of them began to stammer by imitation, many acquired it after whooping cough (which may disturb the habit of respiration), many had it after scarlet fever, etc. A number "stammered or stuttered as soon as they began to talk;" even in these the cause was not congenital brain lesions, as the patients were often readily cured in a few treatments.

"That those persons who have been apparently cured are not really cured" is an opinion that is widespread among the profession and the laity. It has been true in many cases because the "cure" was attempted by persons who were not physicians who understood the proper treatment. In every case of stammering or stuttering the patient can be cured permanently if the proper method is followed. Beating time, speaking in rhythm, lengthening the vowels, etc., are devices that help some people, occasionally permanently, more often transiently; but devices of this kind are only makeshifts. There is only one method of cure that is truly scientific, always successful and absolutely permanent. It consists in analyzing the entire vocal mechanism of the patient and then correcting every fault. This is sometimes a very elaborate process, requiring apparatus for registering the voice and a rather extensive laboratory outfit. At other times the trained ear can catch the essential defects at once.

Of the principles of analysis, a detailed account will be given on some future occasion. At present I merely wish to protest against statements that imply stammering (and stuttering) to be a hopeless disease, whereas in reality every stammerer can be permanently cured.

87 Madison Avenue. E. W. SCRIPTURE.

The Determination of Sex.

NEW HAVEN, CONN., April 25, 1908.

I am not a physician or a biologist, and were it not for the fact that I have been assured by both that no one really knows anything about the subject I choose to discuss, I would be very loath to tread on strange ground in the face of assured opposition. Since no one knows, however, I am prepared to submit the following dissertation for exactly what it is worth, the observation of a fairly good observer, wholly untrained in the subject.

Some years ago my attention was attracted to the question of determination of sex by a neighbor, a farmer, who had a Jersey bull which always sired heifer calves. Out of a whole season's get, I do not know how many, not more than one or two were bull calves. This bull was an exceedingly active, robust animal, I think the most eager of desire of any I have ever seen. I have on my own country place to-day a cow which has had to go to the bull two or three times every season before successful impregnation has been obtained, and she has always had heifer calves. In the average country barnyard where one rooster is kept to a flock of twenty or more hens—or if the flock is bigger the number of roosters is somewhat in proportion—it is common knowledge that out of a setting of eggs probably eight or ten chicks in every dozen to hatch will be cockerels. I am given to understand that in the fancy breeding yards where they guarantee fertile eggs, one rooster runs with only a few hens and the proportion of pullets is greater.

I am, therefore, going to propound the theory that the determination of sex in an embryo is in exact proportion to the desire of the parents. Where the male is the most eager for the connection the offspring will be female; where the female is most eager during her period the offspring will be male.

There is ample reason for this, and there are many other examples to be cited than the ones above. Nature has a way of preserving, or striving to preserve, certain balances in all living creatures. The pendulum swings one way or another, but it returns to the balancing point again, just so surely as it is moved away from it. The balance is the more readily marked in those creatures which run wild, because as soon as man steps in he offers artificial support on one side or the other and destroys the true balance. Now what is more certainly the fact than that in a state of nature, if females become more scarce, the males annoy them more and more until they become partially excited and accept the first male before they are more than on the verge of their season, and such males as come thereafter are dealing with a jaded female which hardly cares whether she accepts them or not. On the other hand, if males become more scarce the female goes longer and longer without meeting one, and when she does meet a male she may have to tease him into a desire which is forced, because he has already been partially or almost completely satisfied before meeting her.

Nature's answer to this is to produce in the embryo the sex most desired. But the desire is physical, not mental, subject to the influence which the mental has over the physical. If the woman be weary and overworked physically and the man fresh and robust, the chance of a female offspring should be exceedingly good, or vice versa if physical conditions are reversed. A man and a woman can not beget such sex in offspring as they choose by merely wishing to produce male or female. It is conceivable, however, that by stimulating the desire of one, unknown to the other, the balance could be thrown substantially as desired, with the very uncertain factor left to be accounted for, that no one, in a state of civilization, can accurately measure proportionate desire, because it is so subject to mental influence. The human appetite is not a simple desire of the bodily organs as in wild creatures.

Compare the families you know where the several offspring are all of one sex. Is not the parent of that sex of a notably less robust or passionate nature than the other? Is not the fire and the desire plainly discernible on the other side? Of course, in a small family the element of chance, physical condition or mental stimulus may have controlled, but in a family of five or six, all of one sex, does not the parental temperament bear out this theory? I know of several families in which there are numerous children, all, or all but one of the same sex, and an obvious difference in parental temperament or physique supports the theory without an exception. This should not be a difficult theory to test, had one the funds and the inclination to spend the necessary time. In these days of incubators and woven fencing it would be possible to separate groups of laying hens by wire fences, in one case having many hens with one rooster and in other cases moving one hen during the day to several roosters who had had no other hen for considerable periods of time. By marking the eggs to keep them separate, hatching them separately, and keeping the chicks

absolutely separate until the sex characteristics became unmistakable, this theory could be tested with some degree of accuracy. The result might or might not be conclusive, depending on how long the experiment was continued, but there should be an average in a short time which would tend to indicate the correctness or the fallacy of the theory. Of course, the test could be made with animals, but our common domestic fowls—or possibly rabbits, of whose ways I do not know enough to venture judgment on them—are the most rapid in reproduction, the easiest to control, and therefore the easiest creatures to experiment with. ALFRED ELLIS.

[COMMENT:—This view is by no means new. Many persons have noted similar instances and have come to similar conclusions. We publish the letter because the theory ought to be familiar to parents and physicians, to the end that exact observations may add to our knowledge on this important subject.—ED.]

Book Notices

THE INTERNATIONAL MEDICAL ANNUAL. A Year-Book of Treatment and Practitioner's Index. By various authors. Cloth. Pp. 647. Price, $3.50. New York: E. B. Treat & Co., 1908.

The annual presents the progress of the past year in all branches of medicine in a compact and readable form. Special subjects like the opsonic theory, passive hyperemia and examination of the feces are treated by special writers well fitted to deal with them. Especially is this the case with regard to the Bier treatment, which is summarized by Schmieden, assistant to Bier. The important subject of the examination of the feces in chronic diseases is treated by E. Young, who gives a good account of the practicable methods. The article is illustrated by photographs, which, while true pictures, lack the distinctness necessary for them to be very instructive. In our opinion, good drawings would give a much clearer idea of what to look for, even if not so accurate.

AUSCULTATION AND PERCUSSION. By Samuel Jones Gee, M.D., Fellow of the Royal College of Physicians. Fifth Edition. Cloth. Pp. 325. Price, $2.00. New York: Oxford University Press, 1907.

This little work, now in its fifth edition, is in some respects unique. Many works on physical diagnosis are largely compilations in which the author in his desire to omit nothing of importance drags in much that is, if not unimportant, at least diverting or confusing. Dr. Gee has evidently aimed, and successfully, to make his statements concise. No material foreign to the subject is brought in, he sticks closely to his text and there is more in many of his paragraphs than in whole pages by other writers on the same topic. The book is truly a marvel of compactness. This compactness naturally leads to a dogmatism in the manner of statement that occasionally arouses one's opposition because the statement is too broad or perhaps is the expression of the author's individual opinion on a question to which there is another reputable side.

The work is unique because with all this conciseness there is a scholarly finish that at times makes one think of the polish and terseness of Bacon's Essays. It is unique in that there is interwoven an almost continuous thread of historical and bibliographic allusion and quotation that blends so harmoniously with the more somber tones of the scientific facts as to give to the whole a warmth and richness of color that attract rather than repel. It is unique also in a certain quaintness of style, a harking back to archaic forms of words, and a persistent habit of using these in their original derivational meaning, and all this without offense. In its odd, almost eccentric combination of artistic beauty and solid usefulness the book makes one think of an antique oriental rug.

We wish our author had seen fit to say at least a few words concerning the *x*-rays as an aid to diagnosis in diseases of the chest, yet his judgment is perhaps right when he decides to omit consideration of this topic: "Inasmuch as few medical men possess the necessary apparatus, the topic has been excluded from the present book." Soon, however, as knowledge concerning the interpretation of skiagraphs becomes more accurate and classifiable, no book can make such omissions. We note also that there is no mention of the phenomena of heart block; nor is there reference to Litten's so-called diaphragm phenomena, or of Grocco's triangle. One wonders at times if the treatment of certain topics is not unnecessarily scanty and curt because of the desire to be concise, and if brevity has not been secured by the sin of omission.

He is unusually clear and thorough in discussing the shape of the chest, the theory of percussion sounds, and pleurisy with effusion. We wish that there were space to give examples of the sane exposition of many topics. But one must be content to say that the work is to be warmly commended as a brief, condensed, sound and scholarly exposition of auscultation and percussion.

CHRONIC CONSTIPATION. By J. Alexander MacMillan, B.A., M.D., Professor of Therapeutics in Detroit College of Medicine. Cloth. Pp. 257. Price, $2.00. Kansas City, Mo.: The Burton Co., 1908.

The subject of constipation is attracting at present an increased amount of attention. This condition, resulting from morbid alteration of function, is probably the basis of a large number of symptoms, both local and constitutional, and may easily be the starting point of grave organic changes. The earlier methods of treatment, based on empiric notions and viewing the disorder as a symptom without seeking for its cause, have largely failed to produce permanent results. Even the dietetic treatment, while it is based on etiologic principles, has not been entirely successful. There is need to study this subject on a broad basis, and this has been done by Dr. MacMillan, although his studies lead him to a somewhat peculiar theory, which, while it does not lack a physiologic basis, must yet be received with some caution as probably representing only a part of the truth. He begins with a consideration of the anatomy and physiology of the intestinal musculature and reaches the conclusion that the natural stimulus of the intestinal peristalsis is mechanical distention. This distention is furnished by the bulk of the feces and by the evolution of gases from the fermentation of the food residues. This being the case, the constipation must depend on the lack of mechanical distention or on insensitiveness to this stimulus. On this basis, the author founds his treatment, which consists in mechanical distention by rectal tampons. The method recommended is sufficiently simple and according to his experience remarkably successful. The account of constipation is supplemented by chapters on colitis and autointoxication, which are sound in theory and contain excellent practical suggestions, although their connection with the central theme is not exceedingly close. The subject is well handled, and the book is certainly suggestive and presents up-to-date views. It is unfortunate that rather frequent typographical errors should mar an otherwise excellent work. While it may be that the author is somewhat enthusiastic in his estimate of his new procedure, his work should be read by those who have occasion to treat habitual constipation.

APPLIED PHYSIOLOGY. By Frederick A. Rhodes, M.D., Professor of Physiology and Embryology, Medical and Dental Departments of the Western University of Pennsylvania. Pp. 206. Cloth. Price $1.50. Pittsburg: Medical Press, 1907.

The first sentence of the preface states the purpose of this book: "I have attempted," says the author, "in this volume to present to the student of medicine whether in school or in practice an explanation of the most important and frequent symptoms of disease met with."

A book which looks even at old facts from a new standpoint is always welcome; hence this one was taken up hopefully, but only to be disappointed. There is nothing in it not to be found in most books on physical and clinical diagnosis, and, of course, this one does not discuss methods of diagnosis. The viewpoint of the author is certainly not novel. The subject matter is offered in the form of slightly amplified lectures notes and, therefore, is not easy or attractive reading. One must interpret and supplement almost every phrase in order to get much meaning from it. For instance, on page 112 we find:

"Flatulence: Gas in the stomach and intestines. Fermentation of fatty foods. Carbon dioxid generated and retained on account of atony. Air swallowed. Regurgitation of pancre-

atic juices, causing flatulency, due to decomposition of carbohydrates which liberates the CO_2. Bacterial fermentation. Interchange of gases between the blood and contents of the stomach. Hysteria."

The first statement is a definition doubtless, but it is not so stated. The other collocations of words are intended to express conditions under which flatulence may arise. However, nothing is said of the relative frequency of the occurrence of them or of the coincidence of any of them. The book may be valuable to students who are listening to the author's lectures, but the general reader will find the same facts more lucidly stated in other works on clinical diagnosis and on practice.

TEXT-BOOK OF OTOLOGY. By Fr. Bezold, M.D., Professor of Otology at the University of Munich, and Fr. Siebenmann, M.D., Professor of Otology at the University of Basle. Translated by J. Hollinger, M.D., Chicago. Cloth. Pp. 315. Price, $3.50. Chicago: E. H. Colegrove Co., 1908.

This work differs in some respects from the average text-book. It is based in good part on the authors' own observations, and has hence a somewhat original and certainly a personal flavor. The views expressed are therefore those of Bezold, which differ sometimes considerably from those usually taught. For instance, many aurists would consider the treatment of pyogenic affection of the middle ear too conservative from a surgical point of view. He likewise condemns removal of adenoids during the earlier course of an acute inflammation of the middle ear even when otherwise indicated, differing thus from other otologists. He favors the use of boric-acid powder in acute purulent otitis, denying the superior results obtained by proper gauze tamponing. Bezold's classification of middle-ear diseases is also peculiar. He wants to drop the name catarrh, and hence calls the condition hitherto known as acute (or chronic) catarrh of the middle ear, by the name acute and chronic otitis media (non-perforative). But the term non-perforative otitis media is already in common use for a well-defined inflammation different from the so-called catarrh. In view of the many individual views expressed, and inasmuch as the authors' style can not be called forcible, the book presents no advantage over its numerous rivals as a text-book for the student. But with its wealth of details it is a valuable and suggestive work for study and comparison for any physician interested in diseases of the ear. The translation is well done, and the book is gotten up creditably.

TREATMENT OF INTERNAL DISEASES, for Physicians and Students. By Dr. Norbert Ortner of the University of Vienna. Edited by Nathaniel Bowditch Potter, M.D., Visiting Physician to the New York City Hospital. Translated by Frederic H. Bartlett, M.D., from the Fourth German Edition. Cloth. Pp. 658. Price, $5.00. Philadelphia: J. B. Lippincott.

There may be some difference of opinion as to the desirability of a work on treatment dissociated from pathology and etiology, especially as the subject is pretty well considered by treatises on the practice of medicine. There is, however, a field for a book intermediate between the work on practice and the text-book on materia medica which will give more details than works on practice and which will discuss the special application to individual diseases more fully than the works on therapeutics. Such a work is supplied by Ortner, and the American edition, under the editorship of Dr. Potter, is well suited to assist the physician in working out the details of treatment. The number of synthetics recommended is larger than is desirable and it is to be feared that some preparations have found a place in the book that may outlast their period of service in actual practice.

THE ANIMAL MIND. By Margaret Floy Washburn, Ph.D., Associate Professor of Philosophy in Vassar College. Cloth. Pp. 333. Price, $1.60. New York: The Macmillan Co., 1908.

This is a study of experimental methods in comparative psychology, including only those aspects of the animal mind to the investigation of which experiment is adapted and to which it has been applied. The first chapter on the difficulties and methods of comparative psychology emphasizes the fact that psychologic inferences are made on the hypothesis that human minds are built on the same pattern and that what a given word or action would mean for one mind, it necessarily means for another mind. In considering methods, the old system of acquiring data regarding animal psychology is designated as the "method of anecdote" and is contrasted with the present experimental method. In the second chapter, the evidences of mind are discussed under "inferring mind from behavior" and "inferring mind from structure." Manifestations of mind in the lowest animal organisms are reviewed, after which sensory discrimination is considered under the head of chemical sense, hearing, vision and space perceptions, followed by a discussion of modification of conscious process by individual experience; of memory in animals and of attention. No claim is made for completeness, nor is any attempt made to draw general conclusions, the book being simply a most interesting and readable synopsis of present knowledge of the subject. A comprehensive bibliography of nearly 500 entries forms a valuable appendix.

DISEASES OF THE HEART. By Professor Th. v. Jürgensen, Tübingen; Professor L. Krehl, Greifswald; and Professor L. von Schrötter, Vienna. Edited, with Additions by George Dock, M.D., Professor of Theory and Practice of Medicine and Clinical Medicine, University of Michigan, Ann Arbor. Authorized Translation from German, under the Editorial Supervision of Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. Pp. 848. Cloth. Price $5.00. Philadelphia: W. B. Saunders Co., 1908.

This American edition of one of the Nothnagel series presents few changes from the German. In some cases more recent contributions, especially those from English and American authors, have been introduced to supplement the original text so that the book presents a truly international character. The introductory chapters on "Insufficiency of the Heart" and "Endocarditis and Valvular Diseases" are by von Jürgensen; "The Myocardium and Nervous Diseases of the Heart" are treated by Krehl, and "The Pericardium" by von Schroetter. A certain amount of repetition is thus necessary since the subjects treated by the first two authors overlap, but this gives also the advantages of a difference of opinion and viewpoint by two specialists. The articles in general are full and the symptomatology of endocarditis and myocarditis is given exhaustively, all the organs of the body being passed in review with reference to the symptoms exhibited by them in consequence of disease of the heart. The articles contain a number of case histories and are supplied with full bibliographies. The work is well illustrated and altogether forms a worthy companion to the other volumes of the series.

A SHORT PRACTICE OF GYNECOLOGY. By Henry Jellett, B.A., M.D., B.Ch., B.A.O. (Dublin University), F.R.C.P.I., Gynecologist and Obstetric Physician to Stevens' Hospital. Third, edition, revised and enlarged. Cloth. Pp. 518, with 310 illustrations. Price $5.00. Philadelphia: P. Blakiston's Son & Co., 1908.

In the present thorough revision the changes have been made particularly in those chapters dealing with operative work, which, indeed, have been practically rewritten. Many new illustrations have been employed, especially those credited to American works, and a number of the old cuts have been withdrawn. New material has been freely added, so that the work has been brought up to the standard set by most recent research. This is noticeable particularly in the chapter devoted to atmokausis and zestokausis and in that on the radical operation for carcinoma uteri. As in previous editions the author has described but one or two of the many various operative procedures in use for the same or similar conditions, but in this very fact lies the value of the book to the student and young practitioner. Dr. Jellett is primarily a teacher of his subject, and this attitude is reflected throughout the volume. Descriptions are short, indications for operation are clearly and concisely given, and pathologic conditions are adequately presented.

PATHOLOGY. By R. Tanner Hewlett, M.D., F.R.C.P., D.P.H., Professor of General Pathology and Bacteriology in King's College, London. Second Edition. Cloth. Pp. 585. Price, $3.25. Philadelphia; P. Blakiston's Son & Co., 1907.

Hewlett's work is intended especially for the medical student who needs to have presented to him from the large number of pathologic facts such as will be of use in the practice of medicine. The author has endeavored to give the essentials of general and special pathology and has met the needs of the medical student in a satisfactory manner. The necessity of preparation of a second edition within a year of the issue of the first testifies to its popularity. In the new edition many additions have been made and the book brought up to date.

DISEASES OF THE NERVOUS SYSTEM. Edited by Archibald Church, M.D., Professor of Nervous and Mental Diseases and Medical Jurisprudence, Northwestern University, Chicago. An authorized translation from "Die Deutsche Klinik." under the general editorial supervision of Julius L. Salinger, M.D. Pp. 1205, with 200 Illustrations. Cloth. Price $5.00. New York: D. Appleton & Co., 1907.

In order to avoid unfair criticism it must be understood that this extensive volume, although beginning in the manner of systematic works with sections on anatomy, pathology and examination, does not pretend to be a complete text-book of nervous diseases. It, rather, is mostly made up of a series of short monographs on some thirty-two neurologic subjects. Many of these are treated adequately by acknowledged authorities, e. g., tabes by Erb, aphasia by Wernicke, myelitis by v. Leyden and Lazarus, but not at all with a view to comparative importance. Thus one might be disappointed in looking up the section on cerebral hemorrhage and embolism to find the subject rather summarily dismissed in seven pages, while, on the other hand, lumbar puncture is treated by the master, Quincke, in thirty-five pages, and the mere symptom aphasia in sixty. Even understanding that the work is no text-book, this feature is rather misleading to one who would judge of it by glancing over the list of contributions. Using the book as a work of reference or for systematic study insofar as its scope affords, one soon finds, however, that what is good is exceedingly good. The hundred pages on tabes is a splendid presentation of the subject, the long chapter on methods of diagnosis by Schuster is thorough, detailed and—a capital point for the general practitioner—written with clear reference of symptoms and signs to the underlying structural conditions. Cassirer, with his usual care, writes on neuritis, trophic and occupation neuroses. Sexual neurasthenia is treated at unusual length by Eulenburg. Gutzmann, another master of his subject, contributes a very careful and practical study on the nature and treatment of disturbances of speech. Some other sections of the work are excellent; rarely one seems to us inadequate, such, for instance, as the few pages on migraine and the scanty discussion of the treatment of exophthalmic goiter.

A still nearer view shows only a few errors such as might easily mar any translated composite work. Example: on page 584 we read in a case report that, "No disturbance of sensation could be determined in the region of the *hypoglossal nerve* and usually none in the course of the pneumogastric." (Italics in the original.) A number of moot points one notices taken out of court in rather an offhand manner, e. g., embolism "manifests a peculiar preference for the right side." The American editor states in his preface that he refrains from discussion of disputed matters and, indeed, offers no addenda whatever. The whole work is thoroughly German, as befits *"Die Deutsche Klinik;"* this is seen in such places as where advice is given for the examination of patients and one suspects it as the main cause for some unsatisfactorily treated subjects; for instance, the path of sensory fibers in the cord—a field which has been especially well worked up by the English. Also, the list of names so preponderatingly German in the extensive index is hardly a fair representation of the great workers in neurology—Remak, for instance, with fifty-two references and only two for Hughlings Jackson!

MORTMAIN. By Arthur Train. Cloth. Pp. 314. Price, $1.50. New York: D. Appleton & Co., 1907.

This book is made up of several stories, medical interest lying in the first, the chief character of which, Mortmain, has the title rôle. A surgeon, having perfected the separate technics of uniting severed bones, blood vessels, nerves, etc., combines them all in one operation on a cat, with success. Then, the opportunity to try this on a human subject presents itself when Mortmain's hand requires amputation because of an injury. A man is found to supply the member to be substituted. Success results; but the grafter hand is a strange one to the new owner, and the former owner of the hand dies as the result of the operation. The plot hinges on the fact that the former owner of the hand had committed a crime which relieved its new owner from imminent bankruptcy, but the grafted hand involves its new owner by reason of the thumb print. The results of this appear in an anesthetic dream which Mortmain has. The problem of the story is whether or not such an operation can be justified, even though it should be done with the consent of the person who loses the member.

DISEASES OF THE NOSE. By Ernest B. Waggett, M.A., M.B., B.C. (Cantab.), Surgeon to the Throat and Ear Department of the Charing Cross Hospital. Cloth. Pp. 282, with illustrations. Price, $2.00. New York: Oxford University Press, 1907.

While this work has all the disadvantages of a manual, and will never take the place of a text-book on rhinology, it gives the author's personal experiences and views, and therefore is of some value. In the preface the author states that the pages are "intended to be read, as they were written, rapidly from cover to cover." If the book had been less hurriedly prepared it might have been better; as it is, it shows evidences of hurried work, notably careless diction. The author also states that the illustrations are chiefly original drawings from Nature; while some are good, others are crude and the details are indistinct.

Miscellany

Education in Matters of Sex.—A. Moll of Berlin, one of the collaborators on the *Ztschr. f. ärztl. Fortbildung* and a well-known psychopathologist, was recently invited by the organization of university students at Berlin to deliver a lecture at one of their meetings. He selected for his theme: "The Sexual Life of the Child," but two weeks before the date he was informed that the head of the university had forbidden the lecture on the ground that the theme selected was not appropriate for a students' meeting, and, further, that its presentation by a practicing physician was not sufficient guarantee that the subject would be treated from the moral and ethical standpoints suitable for such a gathering. The entire faculty of the university endorsed the rector's action, and the matter was written up in the daily papers. The *Ztschr. f. ärztl. Fortbildung*, in discussing the affair, emphasizes the importance for students to learn to know better the workings of children's minds; sooner or later most of them will have more or less to do with the training of children, their own or others'. An auto-summary of Moll's lecture is given in the same number. He maintains that the age at which the sexual impulse first presents itself is much earlier than many suppose, and that an early sexual life may be important for the future; many a child is diverted from work and many a girl led into prostitution by it. At the same time, its consequences in the majority of cases must not be exaggerated. He knows of excellently well-developed persons who fifteen years before or more, at the age of 8 or 9, had a very strong sexual life. He comments on the adroitness with which children conceal the awakening of their sexual instincts. A too early awakening should be prevented, especially by artificial sexual stimuli; erotic literature and pictures should be kept away from the child, local irritation from skin eruptions, etc., cured, and modesty fostered. Coeducation when begun in the primary department is of no moment for sexual development. Education in matters of sex, he says, should not be attempted in the schools, and it is advisable at most for students entering college to enlighten them as to the dangers of venereal diseases. Education of the child in matters of sex should be done individually, best by the mother. Far more important than all is the training in ideals, the development of a moral sense.

Treatment of Facial Neuralgia by Tansini's Technic.—This technic now has a record of 17 cases in which it has been applied and with invariable success, the results remaining absolutely permanent during the interval of from two to nine years or more since the operation. It aims to destroy the nerve with the actual cautery. The needle is introduced as far as possible into the foramen and bone canal, reaching points inaccessible with other instruments. The processes that follow the thermocauterization and the consecutive regeneration alter the structure of the nerve to such an extent that the conduction of sensory impulses becomes impossible. The neu-

ralgia always returned in patients treated with simple neurectomy, after an interval of a few months, but none of his patients has shown the slightest trace of recurrence when the actual cautery was used. The neuralgia in some of the cases was so severe that gasserectomy had been contemplated. S. d'Este publishes in the *Riforma Medica*, March 23, the details of the last six cases thus treated at Tansini's clinic at Pavia. The patients were from 20 to 66 years old, and in some of them a previous neurectomy had proved ineffectual to banish the pain permanently. The neuralgia was of one to thirty-two years' standing. The main point in the technic is the destruction of the central stump under chloroform. The nerve is pulled out as far as possible and the needle is worked deep into the foramen, and then the electric current is turned on for five or ten seconds. All the nerves involved are treated at a single sitting, and resection is done when it is deemed necessary.

History of Medicine.—One of the sections of the German "Naturforscher Congress" this year was devoted exclusively to the history of medicine, as a meeting of the German Society for Study of the History of Medicine. Biographical sketches of Cappeler, 1685-1769, and of Böttger, in the eighteenth century, were read, and various articles on the history of different branches of the medical sciences. Sudhoff exhibited the Latin Codex of Galen, in the Dresden edition, which has a wealth of small pictures portraying medical subjects. P. Richter gave a historical sketch of scarlet fever from its first description by the Arabs. Scarlatinal nephritis was described as early as 1747. It was stated that scarlet fever seems to have grown more serious with time, while other infections seem to have become attenuated. The history of the Leipsic "Lion Apothecary Shop," founded in 1409, was related from official documents. The section adopted a resolution urging better facilities in the universities for study of the history of medicine. Sudhoff has founded the *Archiv für die Geschichte der Medicin*, the first number of which appeared in September. A special bulletin is issued containing the transactions at each meeting of the Society for the History of Medicine. It will be remembered that the chair of the history of medicine at Leipsic was richly endowed by the Puschmann legacy a few years ago. K. Sudhoff is the present incumbent.

Cancer and Erysipelatous Infection.—G. Bolognino reviews the cases on record of erysipelas exerting a favorable influence on cancer and reports two personally observed. In his cases an intercurrent erysipelas followed in the parts ten days after excision of a carcinoma of the testicle in one and a palliative operation on sarcoma of the breast in the other patient. Both cancers had shown exceptionally malignant growth, but since the erysipelas there have been no signs of recurrence during the twenty and thirteen months that have elapsed. He cites 22 authors who have reported an unmistakably favorable influence on cancer from erysipelatous infection and thinks that the reaction from the first excessive enthusiasm is now being carried too far in the other direction. The erysipelas must be a somewhat intense process and the cancer must be small, to have the effect amount to much. He comments favorably on Coley's technic, although he states that the experience of Friedrich and Kocher in Germany failed to confirm the assertions of Coley, Roberts, Stone, Warren and Mynter. His article appeared in the *Ztschr. f. Krebsforschung*, iv, No. 2, page 261.

Differential Diagnosis of Acute Suffocative Catarrh.—Samuel West, in the *Proceedings of the Royal Society of Medicine*, March, concludes an exhaustive article on this subject practically as follows: Laennec's suffocative catarrh is a peculiar and characteristic affection, rare, especially in the adult, and not generally recognized as a clinical entity. It has to be distinguished from capillary bronchitis and disseminated postbronchitic bronchopneumonia. More closely resembling it are primary bronchopneumonia, e. g., disseminated pneumococcal pneumonia, and possibly an acute pneumococcal or other bacterial bronchitis. In association with it may be placed: 1, those cases of acute pulmonary edema which develop in the course of chronic heart obstruction or of acute heart failure; 2, cases of collateral fluxion—respiratory failure; 3, those cases of pneumonia which commence with widespread pulmonary congestion. A careful bacteriologic examination of the sputum should be made in all cases of suffocative catarrh as being likely to throw light on the true nature of the affection.

Treatment of Leg Ulcers.—J. T. Rose, in the *Dietetic and Hygienic Gazette*, gives the following directions for the treatment of ulcers of the leg: 1. Give tonics. Improve the circulation. 2. Reduce inflammation in and around the ulcer by wet dressings. 3. Stimulate the growth of healthy granulations by various applications, but especially naphthalin crystals and diachylon ointment. Apply over this a figure-of-eight zinc oxid adhesive strapping from ankle to above calf. Dress thus once a week. 4. Cover the granulating ulcer with very thin skin grafts, shaved from the leg above with a very sharp razor, without the use of any anesthetic. 5. Apply silver leaf over the grafts and denuded surface. 6. Use figure-of-eight strapping as above. 7. Remove this dressing in two weeks and find the ulcer all healed. 8. Continue to support the circulation as long as necessary. This method gives the best results in the shortest time, with the fewest treatments, with the minimum of lost time, for patients go on about their work as usual.

Respiratory Neuroses.—L. Tarabini reports from Galvagni's clinic at Modena thirty-seven cases of a neurosis affecting the respiration. He discusses the mechanism, ascribing it to some disturbance in the centers of the brain, medulla or spinal cord governing the respiration. The neurosis seemed to be of reflex origin in most of his cases. It came on suddenly when it was due to strong emotion, while it developed more gradually when of other origin. Once established, it seems to occur in attacks of varying intensity, subsiding during sleep. These neuroses may persist indefinitely unless properly treated, the neurasthenic condition requiring suitable measures. Hydrotherapy may prove useful after removing all causes that might favor the neurosis, and some writers have obtained good results from electricity. The neurotic tendency may also be benefited by suggestion. The work appeared in the *Riforma Medica*, March 16 and 23, with numerous tracings.

Contagiousness of Rubella.—H. E. Corbin in the *Proceedings of the Royal Society of Medicine*, February, states that both rubella and measles are admitted into the same wards at the London Fever Hospital, and that during the last two years not one patient with either of these diseases has developed the other. Corbin is inclined to believe that the contagiousness of rubella is at its maximum during the short prodromal period of usually twenty-four hours which occurs before the eruption is manifest, and that it declines rapidly during the following twenty-four hours, disappearing entirely at the end of this period unless faucial catarrh persists. There is little doubt, he says, that the question of age enters much into the question of susceptibility, as shown by a comparison of epidemics in schools and institutions for adults; and this is perhaps more important than previous protection by the disease.

Tics.—Henry Head, in the *Proceedings of the Royal Society of Medicine*, February, states that all true tics cease during sleep, and all can be controlled under exceptional conditions. It is not at all uncommon to find that during a consultation the patient shows no abnormal movements. All sufferers from tic have an unstable nervous system. Many of them are above the average in ability, but there is always something that betrays their want of balance. They are what the French call *"déséquilibrés."* In a vast number of cases there is a bad family history. In one case under Head's care, the mother, a nervous woman, had a brother and four first cousins who stammered badly; the patient, a girl with a profound tic, had a brother who stammered and one who was normal, so far as any obvious neurosis was concerned. The menopause is a not infrequent cause of the development of tic; and such movements are not uncommon among epileptics and high-grade imbeciles.

Treatment of Exfoliating Dermatitis in Infants.—Heubner treats this affection on the same principles as severe intertriginous eczema in infants. No dressings or salves are allowed

during the acute stage, but the most inflamed parts are covered loosely with dilute aluminum acetate. This is followed later by painting the parts with a 3 per cent. solution of silver nitrate and bathing once or twice a day in a tannin bath (20 gm. or 300 grains tannin in 20 liters of water). After the bath the children are thoroughly dried and powdered. He regards the affection as very contagious and usually feeds the children with freshly drawn human milk. L. Langstein relates in the *Therapeutische Monatshefte*, December, 1907, the results in eleven cases in which this treatment was applied, the cure being generally complete in a week or two. He regards the affection as a severe form of pemphigus in the newly born. Four of the infants died; complicating sepsis is almost inevitably fatal!

Suprarenal Preparations in Dermatology.—N. E. Aronstam, in *Central States Medical Monitor*, states that the solution of the active principles of the adrenals, about 1 to 1,500 or 1,000 is a very powerful astringent and soothing agent in acute eczematous conditions and dermatitis. It allays the subjective symptoms, blanches the part by virtue of its astringent property without secondary dilatation of the capillaries. It is well to reinforce its action by the addition of some boric acid and camphor water in the following proportions:

℞. Acidi boracici	gr. v	32
Liquoris adrenalini (1:1,000)	ʒi	4
Aquæ camphoræ	ʒii	8
Aquæ des. q. s. ad	ʒi	30

M. et Sig.: Saturate a piece of sterile gauze with this solution and apply to the inflamed or affected parts; renew the application when the dressing is dry.

Differentiation of Cancer in the Peritoneum by Examination of Ascitic Fluid.—Marini and Florini report in the *Riforma Medica*, January 6, that examination of the ascitic fluid from four patients with carcinoma in the peritoneum revealed certain structural characteristics of the protoplasm and of the nucleus of the cells, readily differentiating them from the normal cells of the peritoneum. The protoplasm had a granular, dense aspect, taking the stain best at the periphery and displaying a tendency to send out processes like buds around the edge. The nucleus was comparatively very large and round, vesicular, or kidney shaped, and stained deeply. The various features of the cells in these cases of cancer are shown in fifteen illustrations.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF ORGANIZATION, POSTGRADUATE WORK, CONTRACT PRACTICE, INSURANCE FEES, LEGISLATION, ETC.

Dr. McCormack in Mississippi.

Following a month of successful work in Louisiana, Dr. McCormack has given two weeks to Mississippi, filling engagements there from April 3 to April 15. The work has been under the management of Dr. P. W. Rowland, of the University of Mississippi. A letter from him in part reads:

"Dr. McCormack closed his itinerary in the state of Mississippi at the Baker Grand Opera House, Natchez, on April 14. He began his tour of the state at Oxford, the center of the state, where he gave a lecture to the student body on the morning of April 3. This was followed by a talk to doctors at 3 o'clock in the afternoon, at which all the physicians of the county were present. In the evening at 8 o'clock he spoke to the people. The large auditorium of the Methodist Church was filled to its full capacity. The expression is general on all sides that our people have never before listened to such a great uplifting and soul-stirring lecture. It has made its impression on the lives of the people in such a way that they will long remember and practice the principles it taught. A movement is now on foot at Oxford looking to improve conditions through the organization of a city board of health. Dr. McCormack has the happy faculty of being able to deliver the keenest thrusts and the most scathing rebukes without causing offense. The benefits which will follow his work are beyond ordinary calculation."

The following quotations from Mississippi papers will show the impression produced on the public by Dr. McCormack's work in that state:

The *Oxford Eagle* says:

"The large audience that greeted Dr. McCormack at the First Methodist Church on Friday evening felt well repaid at the close of his instructive and entertaining talk. If we could hear him often or others like him we would indeed be a wiser, healthier and better people. At the close of the lecture Dr. P. W. Rowland, chairman of the meeting, called on a number of citizens for an expression of their views. All responded promptly, giving their full endorsement and promises of cooperation in all ideas advanced for the health and welfare of the community."

A dispatch from Jackson to the *Commercial Appeal* of Memphis says:

"The First Methodist Church was filled to its capacity last night on the occasion of the address of Dr. J. N. McCormack, the learned and plain-spoken representative of the American Medical Association. Those who went expecting perhaps a dry or abstruse discussion along the lines of medical and hygienic ethics were soon disabused of any such idea. From introductory phrase to the close Dr. McCormack held the interest and attention of everyone, doctors as well as laymen, and to-day mothers, fathers, husbands and wives who listened are thinking over and discussing the very patent truths expressed as to the ordinary habits of living. He pointed out to the people in terms as clear and comprehensive as the sun in an unclouded sky that the very matters which had been regarded as inconsequent or which have failed to stir up more than passive interest are the ones which need looking after. That the address has already had a good effect seems almost certain. The advisability and desirability of improvements on the part of the citizens with a view to cooperating with the health authorities and the doctors and ministers in bringing about practical and sanitary hygienic reform is being considered."

The Meridian *Morning Dispatch* says:

"In two lectures of unusual force Dr. J. N. McCormack yesterday inaugurated a campaign for improved sanitary hygienic conditions that is destined to revolutionize the general method of the metropolis of Mississippi and to spread to the surrounding districts. The evening address was delivered to a representative audience."

One of the most striking evidences of the value of Dr. McCormack's work, as well as of the readiness of the public to act when conditions are once known, is afforded by the *Morning Democrat* of Vicksburg. In his address at this city Dr. McCormack stated that the slaughter houses of Vicksburg were in an indescribable and utterly unendurable condition. The following day the *Democrat* made a personal investigation of the slaughter houses in which the fresh meat supply of the city is prepared, and on the front page of its issue for April 20 prints a description of the conditions as they were found. In an editorial of a column and a half the *Democrat* comments on the effect of Dr. McCormack's statements in arousing the public, as well as on the existing conditions so far as food supplies are concerned. The facts as stated are so horrible that it is impossible to believe that any civilized community will tolerate them for a moment after attention is called to them. The *Democrat* concludes its descriptive article by saying:

"Every obligation that man owes to his fellow-man requires the fullest exposure of these conditions. If there is a law which covers these matters it should be brought to bear. The offenders should be brought before the bar of justice. If there is no law against furnishing death for so much a pound one should be framed to cover such matters."

The editorial concludes:

"The *Democrat* will have no favorites when the health and lives of the people are at stake. It will print the truth regardless of whom it may affect and it does not promise to permit any person or any community to stand in the way of public health. It now makes the earnest request of the health authorities of this city to do something and to do it quickly for the protection of the people whose health and lives have been entrusted to their care and watchfulness. Provide ade-

quate and certain means for the inspection of foreign and home-killed meats and thus preserve the health and safety of this community. In the name of all the people provide means for the protection of health and the preservation of human life."

Lodge Practice.

An article on lodge practice, by Dr. George E. Holtzapple, York, Pa., appears in the April number of the *Pennsylvania Medical Journal*. It is a praiseworthy and careful study of this phase of contract practice and is based on data secured from fraternal orders and from physicians of Pennsylvania. Dr. Holtzapple defines lodge practice as that branch of contract practice which furnishes medical attention to members through an organization or club. In order to secure material for this paper Dr. Holtzapple addressed a circular letter to 231 physicians living in as many different cities in the state, asking for information on seven points as follows:

1. Number of lodges in your town which employ physicians by contract.
2. Membership of such lodges.
3. Number of individuals receiving free treatment owing to the head of the family belonging to such a lodge.
4. Amount paid by such lodges for medical services.
5. Number of physicians in the town doing lodge practice.
6. Number of such physicians belonging to a component county medical society.
7. Provisions in the by-laws of county societies prohibiting lodge practice.

A second letter requesting this information was sent to 150 physicians who did not reply. Of the 231 to whom letters were sent, 126 made no reply. From the 105 replies a table was prepared showing graphically the information received.

The results of the investigation show that in the 105 towns under consideration, 63,238 individuals, either members of fraternal orders or their family, receive treatment at an average annual price of $2 a member. Estimating this on the basis of population, 3 per cent. of the inhabitants receive free medical treatment. As the population of the towns considered amounts to about one-third of the population of the state, it is estimated that about 200,000 individuals in the state of Pennsylvania receive practically free medical treatment.

The reports show that the average amount paid is $1 per annum for each member, when only the member is entitled to treatment and $2 yearly per member when the member and his entire family receive treatment. This would amount to a maximum of $1 for each individual for twelve months' medical attention, or a little over 8 cents a month, or about 2 cents a week.

In considering the personality of the physicians engaged in contract practice, they are divided into three classes: Young men just beginning medical practice and accepting such positions as temporary expedients; men of all ages who have failed to establish well paying practices; those well established and doing a lucrative business, but selfish and avaricious and desirous of securing all the money possible.

In the discussion following the reading of the report, Dr. Albert Eaton of Philadelphia stated that the lodge practice evil is a foreign importation and that it has practically ruined the medical profession in Austria, Germany and Great Britain, and that the same fate will befall the physicians of the United States unless prompt and drastic measures are taken. He objected to lodge practice because it places the practice of medicine on a purely commercial basis, inhibits organization, prevents the physician from obtaining proper remuneration for his service, places a blight on medical progress and reduces the physician who engages in it to the position of a poorly paid promoter for the organization by which he is retained. He considers that the remedy lies in the establishment in medical colleges of a course of lectures on the business side of the medical profession, setting forth the objections, both economic and professional, to such practice. He also declared that the various county medical societies should take positive action regarding this evil and should enforce their decisions.

Enforcing the Texas Medical Practice Act.

The *Texas State Journal of Medicine*, April, discusses the constitutionality of the new Texas medical practice act, and some of the general principles of medical legislation. It says:

The police power of the state is an attribute of sovereignty and exists without any reservation in the constitution. It is founded on the duty of the state to protect its citizens and to provide for the safety and good order of society. Its essential element is to secure orderly government. On it depends the security of social order, the life and health of the citizens, and the comfort of existence in thickly populated communities. Indeed, it is the very foundation of our social system, and finds its basis in the maxim of public policy, *Salus populi suprema est lex*. Everything necessary for the protection and safety, as well as the best interests of the people of the state, may be done under its power, and in its exercise persons and property may be subjected to all reasonable restraints and burdens for the common good. The preservation of the public welfare must be maintained even at the expense of private rights. So the contention of a practitioner that he has secured a right to practice medicine which is a vested right and that it can not be taken away from him is begging the question. The purpose of the legislature is not to take away any man's right, but to regulate him in the exercise of it. . . . The right which a man has by nature may be taken from him if it interferes with the best interest of society.

The principle underlying the theory of the police power of the state, as a means of regulating occupations and professions for the good of the general public can not be too strongly emphasized or impressed on both the public and the profession. Not until there is a proper understanding and appreciation of the purpose of medical legislation shall we see an end of the absurdities and inconsistency of special and sectarian legislation. Only as the public understands and supports medical legislation will it be effective. The medical profession of Texas achieved a notable victory last year in securing legislation substituting a single non-partisan board for multiple partisan boards. If the principles underlying this law are thoroughly understood by the physicians of the state there will be no question of their support and cooperation.

The Professional Secret in Austria.

The legal status of the professional secret appears to be causing considerable disturbance in the minds of our Austrian colleagues. The Austrian law on the subject, as laid down in paragraph 498 of the *Aerzte-Ordnung*, is as follows:

The physician, the surgeon, the obstetrician or the midwife who shall disclose the secret of the persons who confide in them to anyone, save only to a competent official interrogating them on the matter in the discharge of duty, shall be punished for this offense, on the first occasion by suspension of the right to practice for a period of three months, on the second occasion for one year, and on a third offense permanently.

As things are, the medical profession considers the exception which permits disclosure a permission which is only too prone to become a compulsion. According to the *Vocho de Kuracistoj*, however, there is under consideration a new ordinance, of which paragraph 359 reads as follows:

Physicians, surgeons, apothecaries, accoucheurs and registrars of deaths, at all times when they shall become aware of any sickness, wound, birth or death which leads them to suspect some crime or offense, or indeed any severe injury caused by a third person, shall without delay report it to the officials. The non-fulfilment of this obligation shall be punished by a fine of from 10 to 100 florins.

It will be seen that this ordinance places the medical profession in the objectionable position of a detective force at the orders of the government. The Austrian profession is demanding that the new paragraph shall be entirely rejected and that the existing paragraph 498 shall also be modified. The medical chamber in Austria, however, on the advice of its counsel, has half yielded the principle involved, by proposing to free the physician from the obligation only of testifying concerning what the patient confided to him, leaving it incumbent on the physician to testify or inform concerning those circumstances which he may have found out by himself.

Faith Healing in Maryland.

An amendment to the medical practice act in Maryland has just been secured, requiring that hereafter Christian Scientists, faith healers or other sectarian practitioners, must be graduates of recognized medical colleges, and must pass the examination before the State Board of Medical Examiners, thereby obtaining certificates as physicians before being allowed to practice.

In commenting on the new law, the *Philadelphia Telegraph*, March 26, says editorially: "Maryland will have no more foolishness about faith healing, under any sort of sectarian denomination in her borders. No more use of mental or psychologic therapeutics by untrained, untaught practitioners; no more making a trade or profession of dealing with the mysteries of health and disease and the laws of Nature for hire by ignorant persons unqualified to handle such problems; no more 'absent treatment' for present payment in hers!

"It seems to an unbiased mind a most just and reasonable law, not oppressive on any form of faith nor restrictive of any proper rights, but conceived for 'the greatest good of the greatest number.' The value of mental healing in various forms has been too often and too conclusively demonstrated to be utterly denied with any sort of reason; and where a healer's services are given gratis, either from a general spirit of Christian charity or from special motives of interest and affection, no one can properly protest against a well-meaning effort; but where persons sell their services for hire and make a practice of it, they should be compelled to give good guarantee of their qualifications and abilities."

POSTGRADUATE COURSE FOR COUNTY SOCIETIES.

DR. JOHN H. BLACKBURN, DIRECTOR.
BOWLING GREEN, KENTUCKY.

The following county societies, in addition to those already reported, have adopted and are now conducting the course of postgraduate study, making a total to date of 76 societies which are following it.

INDIANA: Hart County.
IOWA: Bremer County.
Emmet Count.
KENTUCKY: Clark County.
Hickman County.
LOUISIANA: Calcasieu Parish.
Lafayette Parish.
NEBRASKA: York County.
NEW JERSEY: Mercer Councy.
OHIO: Newcomerstown Club.
(Tuscarawas County.)
TENNESSEE: Rutherford County.
WEST VIRGINIA: Fayette County.

[The Director will be glad to furnish further information and literature to any county society desiring to take up the course.]

Eighth Month.

SECOND WEEKLY MEETING.

Etiology of Typhoid Fever.

Influence of age and sex, mode of living, pregnancy, other diseases. Geographic distribution. Season. Repeated attacks. Immunity.

Bacteriology.

Historical Review.

Murchison's decomposition theory. Trousseau's direct transmission theory. Budd's views, 1856-60. Ground water theory, Buhl and Pettenkofer. Work of von Recklinghausen, of Ebarth and Gaffky.

Methods of Detection.

Morphology and biology. Bacillus of Eberth; shape and size. Filaments. Flagella. Motility. Staining characteristics. Growth. Temperature. Anaerobiosis. Media. Articles of food. Gelatin cultures. Agar cultures. Potato culture. Differentiate from *Bacillus coli*. Blood cultures. Cultures from rose spots, spleen, stools, urine.

Methods of Transmission.

Escape of bacilli from body, by feces, by urine, by other excretions. Vitality of typhoid bacilli in cadavers. In soil. Effect of cold, heat, light on bacilli. Persistence of bacilli in stools. Portal of entry of bacilli to body. Bacillus carriers. Water. Effects of filtration. Milk. Vegetables. Oysters. Transmission through air, through earth, on linen.

Medical Education and State Boards of Registration

COMING EXAMINATIONS.

LOUISIANA Homeopathic Board of Medical Examiners, New Orleans, May 5. Secretary, Dr. Gayle Aiken, 1102 St. Charles Ave., New Orleans.

TENNESSEE State Board of Medical Examiners, Memphis, Nashville and Knoxville, May 5. Secretary, Dr. T. J. Happel, Trenton.

MISSISSIPPI State Board of Health, State Capitol, Jackson, May 12. Secretary, Dr. J. F. Hunter, Jackson.

ILLINOIS State Board of Health, City Hall, East St. Louis, May 12-14. Secretary, Dr. J. A. Egan, Springfield.

MASSACHUSETTS State Board of Registration in Medicine, State House, Boston, May 12-14. Secretary, Dr. Edwin B. Harvey, Room 159, State House, Boston.

NORTH CAROLINA State Board of Medical Examiners, Winston-Salem, May 19. Secretary, Dr. G. T. Sikes, Grissom.

NEW YORK State Board of Medical Examiners, Albany, May 19-22. Chief of Examinations Division, Charles F. Wheelock, Albany.

LOUISIANA State Board of Medical Examiners, New Orleans, May 21-22. Secretary, Dr. Felix A. Larue, 211 Camp St., New Orleans.

INDIANA Board of Medical Registration and Examination, Indianapolis, May 26-28. Secretary, Dr. W. T. Gott, 120 State House, Indianapolis.

NEBRASKA State Board of Health, State Capitol, Lincoln, May 27-29. Secretary, Dr. E. J. C. Sward, Oakland.

The American Medical School and Its Entrance Requirements.

In his address before the American Academy of Medicine, which was printed in the *Indiana Medical Journal*, April, 1908, President Jordan of Leland Stanford University gave his views regarding medical schools and preliminary education. He said that the practice of medicine was not a trade but a profession; that medicine should be taught by the most effective methods and must be based on a thorough knowledge of the sciences on which its art depended. The essentials of medical instruction are well-equipped laboratories, good hospitals and competent teachers. The standards of admission and graduation should be such as to exclude the grossly ignorant and unworthy men from the professional degree. He favored the combination course, stating that if the medical work is of university standard and obtained in a university atmosphere, the university could well afford to abate its non-professional requirements in order that the professional student would not have to enter on the practice of his profession too late in life.

Speaking of the natural line of cleavage at the close of the sophomore year of the college of arts, Dr. Jordan suggested that the work of the universities, including the department of medicine, should begin with the present junior year, leaving what is now included in the freshman and sophomore years of liberal arts' work to the colleges, larger high schools and preparatory schools. The medical course should then be lengthened to five years. The requirement of a single year of collegiate chemistry and biology as a preliminary requirement was a necessary step in advance—a short step and a temporary one, but the requirement of two such years was to be preferred.

University of Mississippi to Teach a Complete Medical Course.

Since 1903 the University of Mississippi at Oxford has been teaching the first two years of the medical course. Beginning this fall, however, the complete four-year course will be offered, the last two or clinical years to be given at Vicksburg. This has been made possible by the recent action of the city of Vicksburg in transferring to the university the Vicksburg State Charity Hospital. The entire property, transferred by deed, is valued at $150,000.

Arkansas January Report.

Dr. F. T. Murphy, secretary of the State Medical Board of the Arkansas Medical Society, reports the written examination held at Little Rock, Jan. 14, 1908. The number of subjects examined in was 7; total number of questions asked, 70; percentage required to pass, 75. The total number of candidates examined was 40, of whom 24 passed, including 14 non-graduates, and 16 failed, including 13 non-graduates. The following colleges were represented:

PASSED.

College.	Year Grad.	Per Cent.
College of P. and S., Chicago	(1904)	81
Rush Med. Coll.	(1874)	80
Louisville Med. Coll.	(1907)	83, 88
University of Louisville	(1907)	86
College of P. and S., Baltimore	(1903)	88
Barnes Med. Coll.	(1898) 76; (1907)	87
College of P. and S., St. Louis	(1896)	75
University Med. Coll., Kansas City	(1897)	77

LICENSED WITHOUT EXAMINATION.

There were also licensed at this examination six old practitioners, including one non-graduate, who were granted license by reason of having been registered under the old law. The following colleges were represented:

College.	Year of Grad.
University of Arkansas	(1888), (1896)
College of P. and S., Chicago	(1906)
Rush Med. Coll.	(1895)
Meharry Med. Coll.	(1893)

FAILED.

Medical College of Georgia	(1906)	70
Meharry Med. Coll.	(1907)	49, 71

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish name or address will be faithfully observed.

FORMULA FOR AROMATIC SYRUP OF CHOCOLATE.

PISGAH, MD., April 10, 1908.

To the Editor:—Please publish a simple working formula for an aromatic syrup of chocolate, to be used as a vehicle, especially for quinin sulphate. GEORGE C. BICKNELL, M.D.

ANSWER.—While considerable skill and attention to details are required to make a syrup of chocolate satisfactory in every way, the following simple process will yield a good product: Heat to boiling one pint of water. Mix 4 ounces of powdered chocolate (Baker's powdered chocolate is satisfactory), with sufficient water to make a smooth semi-liquid paste and add this to the boiling water. Also add 1½ pounds granulated sugar, and continue the heat until this has dissolved. When partially cooled, transfer the syrup to carefully cleaned bottles. Should flavor, beyond that of the chocolate, be desired, a little tincture of vanilla or spirit of cinnamon may be added.

JOURNALS FOR MEDICAL STUDENTS.

CHICAGO, April 18, 1908.

To the Editor:—Will you tell me if there is any journal of anatomy or other publication especially addressed to students of medicine? J. W. BRADY.

ANSWER.—We know of no journal of anatomy or other periodical in this country especially addressed to medical students. A *Journal of Anatomy and Physiology* is published by C. Griffin & Co., Exeter street, London, at six shillings ($1.50) for each part—anatomic and physiologic; the *American Journal of Physiology* is published by Ginn & Co., Boston, monthly, $5 per annum. Both these journals, however, so far from being for students, are of the highest scientific caliber, and are suited only for anatomists and physiologists of the most advanced type.

IS "FORCEPS" SINGULAR OR PLURAL?

COLUMBUS, OHIO, April 25, 1908.

To the Editor:—In the Transactions of the American Gynecological Society, in an article written by a very eminent physician, the first line reads: "When the forceps were first invented it was regarded as," etc. The question is as to the propriety of the "were" and the "it." One or the other would certainly seem to be wrong, but which? As a rule, I think, in ordinary writing, and in discussion, forceps is used in the plural; but, on the other hand, it is frequently used as singular. Which is correct?

J. F. BALDWIN.

ANSWER.—Forceps is singular. It is a noun of the third declension: *forceps*, genitive *forcipis*, plural *forcipes*, genitive *forcipum*—both masculine and feminine. Some writers, however, treating the word as Anglicized, also use the singular form forceps (to avoid the harsh sibilant of forcepses) in place of the Latin *forcipes*, as a plural.

EXTUBATION METHOD OF RENAULT AND MARFAN.

YONKERS, N. Y., April 16, 1908.

To the Editor:—Where can I find a description of the methods of extubation of Renault and of Marfan?

ANSWER.—The original articles appeared in the *Annales de Méd. et Chirurgie Infantiles*, June 1 and 15, 1907, respectively. The methods are described by J. R. Clemens in the *Archives of Pediatrics*, February, 1908, and an abstract of this article appeared in THE JOURNAL, April 11, 1908, p. 1222.

LIST OF ARTICLES RELATING TO OPSONINS.

POPLAR BLUFF, MO., April 3, 1908.

To the Editor:—Please advise me where I can get authentic literature on the opsonic theory. ALFRED R. ROWE.

ANSWER.—A list of articles dealing with this subject was published in THE JOURNAL A. M. A., May 4, 1907, p. 1539. The following additional articles have been published up to April, 1908:

Albert, H.: Opsonic Index and Vaccine Therapy, *Iowa Med. Jour.*, August, 1907; also *Western Med. Rev.*, October, 1907.

Alderson, H. E.: The Opsonins and Certain Bacterial Cutaneous Diseases, THE JOURNAL A. M. A., Aug. 3, 1907, abstracted from *Jour. Cutan. Dis.*, July, 1907.

Amberg, S.: Opsonic Content of Blood of Infants, THE JOURNAL A. M. A., Jan. 26, 1907, p. 304.

Arinkin, M., and Schneider, C.: Opsonins and Their Diagnostic Importance, *Berl. klin. Wchnschr.*, Feb. 3, 1908.

Bass, C. C.: Present Status of Opsonins and Vaccine Therapy, *New Orleans Med. and Surg. Jour.*, January, 1908.

Beebe, T. C., Jr.: Applications of Opsonic Therapy, *Boston Med. and Surg. Jour.*, Jan. 9, 1908.

Bergey: Nature of Opsonins and the Limit of Bacterial Inoculations in the Treatment of Infections, *Month. Cycl. Prac. Med.*, August, 1907.

Bergey, H.: Opsonins and Vaccines as Applied to Surgical Therapy, *Univ. Penn. Med. Bull.*, June, 1907.

Boelike, O.: Opsonins in Acute Infections, THE JOURNAL A. M. A., Oct. 19, 1907, p. 1407, abstracted from *Deutsch. med. Wchnschr.*, Sept. 12, 1907.

Bine, R., and Lissner, H.: Opsonins in Pulmonary Tuberculosis, *Münch. med. Wchnschr*, Dec. 17, 1907.

Bolduan, C. E.: Value of Opsonins in Treatment of Bacterial Infection, THE JOURNAL A. M. A., Nov. 2, 1907, abstracted from *Long Island Med. Jour.*, October, 1907.

Bosanquet, W. C., and French, R. E.: Influence of Antituberculous Serum on the Opsonic Index, *Brit. Med. Jour.*, April 13, 1907.

Brown, O. H.: Some Modifications of the Technic of the Opsonic Index Tests, THE JOURNAL A. M. A., Feb. 22, 1908, p. 602.

Brown, O. H.: Value of Opsonic Index in Diagnosis and Treatment of Tuberculosis, *St. Louis Med. Rev.*, May 25, 1907.

Clarke, C. P., and Simonds, J. P.: A Study of Typhoid Opsonins, THE JOURNAL A. M. A., Feb. 29, 1908, abstracted from *Jour. Infect. Dis.*, January, 1908.

Clarke, H. H., and Sutherland, H. G.: Effect of Tuberculin on General Tuberculo-Opsonic Index in Tuberculous Patients, THE JOURNAL A. M. A., Aug. 17, 1907, abstracted from *Lancet*, July 20, 1907.

Charteris, F. J.: Changes Observed in Blood Count and Opsonic Index During Prolonged Fast, *Lancet*, Sept. 7, 1907.

DaCosta, J. C., Jr.: The Opsonic Index in Diabetes Mellitus, *Am. Jour. Med. Sc.*, July, 1907.

Dodds, H. B.: Modification of Leishmann's Method of Estimating the Opsonic Index, THE JOURNAL A. M. A., Nov. 9, 1907, p. 1163, abstracted from *Brit. Med. Jour.*, Oct. 12, 1907.

Hamilton, A.: Opsonic Index and Vaccine Therapy of Pseudodiphtheric Otitis, THE JOURNAL A. M. A., July 6, 1907, abstracted from *Jour. Infect. Dis.*, June 15, 1907.

Hektoen, L.: Opsonins and Therapeutic Inoculations of Dead Bacteria, *Ibid.*

Hollister, J. C.: Opsonins, Opsonic Index and Vaccine Therapy, THE JOURNAL A. M. A., Aug. 10, 1907, abstracted from *Illinois Med. Jour.*, July, 1907.

Houghton, E. M.: Theory of Opsonins and Bacterial Vaccines, *Detroit Med. Jour.*, May, 1907.

Houston, T., and Rankin, J. C.: Opsonic and Agglutinative Power of Blood Serum in Cerebrospinal Fever, *Brit. Med. Jour.*, Nov. 16, 1907.

Houston, T., and Rankin, J. C.: Opsonic Power of Serum with Reference to the Meningococcus of Cerebrospinal Fever Occurring in the Belfast Epidemic, *Lancet*, May 4, 1907.

Inman, A. C.: Exercise and Opsonic Index in Tuberculosis, THE JOURNAL A. M. A., Feb. 22, 1908, p. 647, abstracted from the *Lancet*, Jan. 25, 1908.

Jeans, P. C., and Sellards, A. W.: Tuberculo-Opsonic Index and Treatment by Tuberculin, THE JOURNAL A. M. A., Aug. 31, 1907, p. 804, abstracted from *Johns Hopkins Hosp. Bull.*, June-July, 1907.

Kämmerer, H.: Opsonins and Phagocytosis, *Münch. med. Wchnschr*, Sept. 24, 1907.

Kellogg, W. R. M.: Opsonic Index in Tuberculosis, *Northwest Med.*, July, 1907.

Kline, H.: Opsonins in Typhoid Immunity, *Johns Hopkins Hosp. Bull.*, June-July, 1907.

Knight, A. L.: Opsonins, *Lancet-Clinic*, April 27, 1907.

Leonard, E. L.: Opsonic Index as a Guide to the Administration of Vaccines, THE JOURNAL A. M. A., April 4, 1908, p. 1151, abstracted from *South. California Pract.*, February, 1908.

Levaditi, C.: Opsonins, *Presse méd.*, Aug. 31, 1907.

Levaditi, C.: Opsonins and the Treatment of Infectious Diseases, *Presse méd.*, Sept. 7, 1907.

McClintock, R. W.: Opsonic Therapy in Skin Diseases, *Illinois Med. Jour.*, July, 1907.

McConnell, G.: Opsonin and Vaccine, *St. Louis Med. Rev.*, November, 1907.

McFarland, J.: The Nephelometer, THE JOURNAL A. M. A., Oct. 5, 1907.

McFarland, J., and L'Engle, E. M.: The Specific Nature of Opsonins, THE JOURNAL A. M. A., Oct. 5, 1907, p. 1178.

Mace, L. S.: Opsonins, Technic of *California State Jour. Med.*, April, 1907.

Magruder, A. C., and Webb, G. B.: Acute Otitis Media, Treated by the Opsonic Method, *Laryngoscope*, November, 1907.

Martyn, G.: General Septicemia Treated by Bacteriotherapy, THE JOURNAL A. M. A., Feb. 1, 1908, p. 362.
Moss, W. L.: Opsinins, THE JOURNAL, A. M. A., Aug. 31, 1907, abstracted from *Johns Hopkins Hosp. Bull.*, June-July, 1907.
Neuberger, T.: Opsonic Method, *Deutsch. med. Wchnschr.*, Dec. 12, 1907.
Noguchi, H.: Influence of Reaction and Desiccation on Opsonins, THE JOURNAL A. M. A., Aug. 10, 1907, p. 523, abstracted from *Jour. Exper. Med.*, July 17, 1907.
O'Brien, J. D.: Opsonins and the Use of Therapeutic Vaccination in Treating General Paralysis of the Insane, THE JOURNAL A. M. A., June 29, 1907, p. 2180.
Ogilvy, C., and Coffin, T. H.: The Opsonic Index in Orthopedic Surgery, THE JOURNAL A. M. A., Jan. 11, 1908, p. 115.
Ohlmacher, A. P.: Therapeutic Bacterial Inoculation with and without Opsonic Index as a Guide, *Jour. Mich. Med. Soc.*, July, 1907.
Ohlmacher, A. P.: Enlarged Field of Opsonic or Bacterial Therapy, *Ohio State Med. Jour.*, Sept. 15, 1907.
Ohlmacher, A. P.: Practical Bacterial Therapy and the Theory of Opsonins, *Ohio State Med. Jour.*, May, 1907; *Columbus Med. Jour.*, August, 1907.
Opie, E. L.: Opsonins of Inflammatory Exudates, THE JOURNAL, A. M. A., Oct. 26, 1907, abstracted from *Jour. Exp. Med.*, Sept. 21, 1907.
Opie, E. L.: Opsonins and Their Relations to Diagnosis and Treatment of Bacterial Infections, *Yale Med. Jour.*, May, 1907.
Painter, C. F.: Experience with Opsonins and Bacterial Vaccines in Arthritis, THE JOURNAL A. M. A., Nov. 23, 1907, p. 1803, abstracted from *Boston Med. and Surg. Jour.*, Nov. 7, 1907.
Park, W. H., and Biggs, H. M.: Opsonic Index as a Guide to Regulate the Use of Vaccines in the Treatment of Disease, *Jour. Med. Research*, October, 1907.
Paton, D. M.: Passive Raising of the Opsonic Index, *Med. Press and Circular*, June 12, 1907.
Pigger, H.: Artificial Pneumothorax and the Opsonic Index, THE JOURNAL A. M. A., Feb. 8, 1908, p. 488, abstracted from *Beitr. z. Klin. d. Tuberk.*, viii, 4.
Porter, L.: Opsonins, *California State Jour. Med.*, April, 1907.
Potter, N. B.: Opsonins in Normal and Pathologic Sera, THE JOURNAL A. M. A., Nov. 30, 1907, p. 1815.
Potter, N. B., and Krumwiede, C.: Opsonins in Pneumonia and in Four Streptococcus Infections. THE JOURNAL A. M. A., Dec. 14, 1907, p. 2038, abstracted from *Jour. Infect. Dis.*, November, 1907.
Rankin, A. C.: Effect of Anesthesia on the Opsonic Index, *Montreal Med. Jour.*, January. 1908.
Riessmann, C., and Mayo, H.: Opsonic Treatment in Pulmonary Tuberculosis, THE JOURNAL A. M. A., Oct. 19, 1907, p. 1406, abstracted from *Australas. Med. Gaz.*, Aug. 20, 1907.
Romanelli, G.: Opsonic Index of Blood Serum in Tuberculosis, *Gaz. d. Osp.*, Sept. 1, 1907.
Rosenow, C.: Human Pneumococcal Opsonin and Antiopsonic Substance in Virulent Pneumococci, THE JOURNAL A. M. A., July 6, 1907, abstracted from *Jour. Infect. Dis.*, June 15, 1907.
Rosenow, E. C.: Virulent Pneumococci, Opsonin and Phagocytosis, *Ill. Med. Jour.*, January, 1908.
Ross, G. W.: Opsonins and Practical Results of Therapeutic Inoculation with Bacterial Vaccines, THE JOURNAL A. M. A., Oct. 12, 1907, p. 1245.
Rotch, T. M., and Floyd, C.: The Opsonic Index and the Tuberculin Test, THE JOURNAL A. M. A., Aug. 24, 1907.
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Shaw, C. J.: Opsonic Index in Sane and Insane, THE JOURNAL A. M. A., June 8, 1907, abstracted from the *Lancet*, May 11, 1907.
Shorer, E. H.: THE JOURNAL A. M. A., Feb. 15, 1908, abstracted from *Med. Fortnightly*, Jan. 25, 1908.
Simon, C. E.: Opsonins, *Ibid.*
Sleeswijk, J. G.: Research on Opsonins, *Ann. de l'Inst. Pasteur*, December, 1907.
Squire, J. E.: Opsonins in the Treatment of Tuberculosis, THE JOURNAL A. M. A., July 13, 1907, p. 191, abstracted from *Brit. Med. Jour.*, June 15, 1907.
Stark, J.: Surgical Tuberculosis and Opsonic Index, *Brit. Med. Jour.*, June 29, 1907.
Strubell, A.: Opsonins, *Münch. med. Wchnschr.*, Oct. 29, 1907.
Taylor, A.: The Opsonic Index and Agglutination in Cerebrospinal Meningitis, *Lancet*, July 6, 1907.
Taylor, R. T., and Knorr, E. A.: Study of Vaccines and the Opsonic Index in Relation to Orthopedic Surgery, *Am. Jour. Orthop. Surg.*, July, 1907.
Thomas, B. A.: Variability and Unreliability in the Determination of the Opsonic Index, THE JOURNAL A. M. A., Oct. 12, 1907, p. 1249.
Thurston, H. S.: Practical Application of Opsonins, *Indiana Med. Jour.*, June, 1907.
Tunnicliff, R.: Streptococco-Opsonic Index in Scarlatina, THE JOURNAL, A. M. A., July 6, 1907, abstracted from *Jour. Infect. Dis.*, June 15, 1907.
Tunnicliff, R.: Opsonic Index in Diphtheria, THE JOURNAL, A. M. A., Feb. 29, 1908, abstracted from *Jour. Infect. Dis.*, January, 1908.
Turton, E., and Appleton, R.: Relative Opsonic Power of the Mother's Blood, Serum and Milk, *Brit. Med. Jour.*, April 13, 1907.
Turton, E.: Opsonic Treatment of Pulmonary Tuberculosis by Tuberculin, *Practitioner*, November, 1907.
Varney, H. R.: Opsonic Therapy in Skin Diseases, THE JOURNAL A. M. A., July 27, 1907.
Walker, R. E.: Phagocytosis in Relation to the Opsonic Index, THE JOURNAL A. M. A., Oct. 5, 1907, p. 1222, abstracted from *Jour. Med. Research*, July, 1907.
Warner, L. H.: Opsonin Theory and Probable Future for Bacterial Vaccines, *Med. Fortnightly*, Feb. 10, 1908.
White, A. H.: The Opsonic Index and Therapeutic Inoculation of Bacterial Vaccines, *Dublin Med. Jour.*, September, 1907.
Whitefield, A.: Opsonic Method in Skin Diseases, *Jour. Cutan. Dis.*, December, 1907.
Wiens: Antiferment Reaction of Blood and Its Connection with the Opsonic Power in Acute Infectious Diseases, *Münch. med. Wchnschr.*, Dec. 31, 1907.
Wright, A. E.: Principles of Vaccine Therapy, THE JOURNAL A. M. A., Aug. 10 and 17, 1907.

The Public Service

Army Changes.

Memorandum of changes of stations and duties of medical officers, U. S. Army, week ending April 25, 1908:

Schreiner, E. R., asst.-surgeon, returned to duty at Army General Hospital, San Francisco, from detached service to Madison Barracks, N. Y., and leave of absence.

Clark, J. A., asst.-surgeon, ordered to Madison Barracks, N. Y., for temporary duty.

DeLoffre, S. M., asst.-surgeon, ordered to Columbus Barracks, O., for duty; advanced to grade of captain, with rank, from Sept. 10, 1907.

Davis, W. R., asst.-surgeon, ordered to accompany troops from San Francisco, to Ft. Thomas, Ky., and return; granted leave of absence for fifteen days.

Greenleaf, H. S., asst.-surgeon, ordered to duty at Madison Barracks, N. Y., at the expiration of his present leave of absence.

Kendall, W. P., surgeon, granted leave of absence for one month, about April 20.

Harris, H. S. T., surgeon, granted an extension of one month to his leave of absence.

Thornburgh, R. M., asst.-surgeon, ordered, at the expiration of his present leave of absence, to Alcatraz Island, Cal., for duty at the Pacific Branch, U. S. Military Prison.

Gunckel, G. I., dental surgeon, left Ft. Morgan, Ala., for duty at Ft. Barrancas, Fla.

Ames, J. R., dental surgeon, relieved from duty at Ft. Leavenworth, Kans., and ordered to Jefferson Barracks, Mo., for duty.

Mount, J. R., cont. surgeon, granted an extension of ten days to his leave of absence.

Wells, F. M., contract surgeon, granted leave of absence for two months, about June 10.

Kieruliff, H. N., contract surgeon, arrived at Ft. Apache, Ariz., for duty.

Kress, C. C., contract surgeon, arrived at Ft. Sill, Okla., for temporary duty.

Wilson, E., contract surgeon, ordered from Presidio of Monterey, Cal., to Department Rifle Range, Point Bonita, Cal., for duty.

Mount, J. R., contract surgeon, granted an extension of ten days to his leave of absence.

Johnstone, E. K., contract surgeon, ordered to duty with troops in the Yosemite National Park.

Bastion, J. E., contract surgeon, returned to Ft. D. A. Russell, Wyo., from leave of absence.

Tignor, E. P., dental surgeon, left Ft. DuPont, Del., for duty at Ft. Schuyler, N. Y.

Hammond, W. G., dental surgeon, ordered to visit in succession Ft. Wingate, N. M., Ft. Apache, Ariz., Whipple Barracks, Ariz., Ft. Huachuca, Ariz.

Cass, W. E., contract surgeon, relieved from duty at Vancouver Barracks, Wash., and ordered to his home, St. Louis, Mo., for annulment of contract.

Hewitt, J. M., contract surgeon, granted leave of absence for twenty days.

Ashburn, J. K., contract surgeon, arrived at Ft. Assinniboine, Mont., for duty.

Jones, G. B., contract surgeon, relieved from duty in the Philippines Division, and directed to proceed to San Francisco, for further orders.

Pinquard, J., contract surgeon, granted leave of absence for one month.

Public Health and Marine-Hospital Service.

List of changes of stations and duties of commissioned and noncommissioned officers of the Public Health and Marine-Hospital Service for seven days ended April 22, 1908:

Brooks, S. D., surgeon, granted leave of absence for three days, from April 20, 1908.

Holt, J. M., passed asst.-surgeon, granted leave of absence for 7 days, from April 21, 1908.

Vogel, C. W., passed asst.-surgeon, granted leave of absence for 1 month, from May 1, 1908.

Altree, G. H., acting asst.-surgeon, granted leave of absence for 30 days, from May 5, 1908.

Bailey, C. A., acting asst.-surgeon, directed to proceed from St. John, New Brunswick, to Quebec, Canada, for duty.

Brown, S. E., acting asst.-surgeon, leave of absence granted for 14 days, from March 15, 1908, revoked.

Foster, S. B., acting asst.-surgeon, leave of absence granted for 15 days, from April 6, 1908, revoked.

Foster, S. B., acting asst.-surgeon, granted leave of absence for 7 days, from April 13, 1908.

Hamilton, J. H., acting asst.-surgeon, granted leave of absence for 2 days, from April 20, 1908.

Simonson, G. T., acting asst.-surgeon, leave of absence granted for 2 days, revoked.

Small, E. M., acting asst.-surgeon, granted leave of absence for 8 days, from April 18, 1908.

BOARDS CONVENED.

Boards of medical officers were convened to meet on April 27, 1908, for the purpose of examining candidates for the position of cadetship in the revenue-cutter service as follows:

New York: Passed Asst.-Surgeon J. A. Nydegger, chairman; Acting Asst.-Surgeon F. Mahoney, recorder.

Portland, Me.: Surgeon W. P. McIntosh, chairman; Acting Asst.-Surgeon A. F. Stuart, recorder.

Boston: Surgeon R. M. Woodward, chairman; Asst.-Surgeon T. W. Salmon, recorder.

Philadelphia: Surgeon J. M. Gassaway, chairman; Passed Asst.-Surgeon Taliaferro Clark, recorder.

Baltimore: Surgeon L. L. Williams, chairman; Asst.-Surgeon H. J. Warner, recorder.

San Francisco: Surgeon H. W. Austin, chairman; Passed Asst.-Surgeon C. H. Gardner, recorder.

Chicago: Surgeon G. B. Young, chairman; Passed Asst.-Surgeon J. S. Boggess, recorder.

Seattle: Passed Asst.-Surgeon M. W. Glover, chairman; Asst.-Surgeon C. W. Chapin, recorder.

Washington: Assistant Surgeon-General W. J. Pettus, chairman; Passed Asst.-Surgeon J. W. Trask, recorder.

Galveston: Passed Asst.-Surgeon G. M. Corput, chairman; Acting Asst.-Surgeon W. H. Gammon, recorder.

Mobile: Surgeon G. M. Guiteras, chairman; Acting Asst.-Surgeon J. O. Rush, recorder.

Detroit: Surgeon Fairfax Irwin, chairman; Passed Asst.-Surgeon M. J. White, recorder.

Newport News: Asst.-Surgeon G. L. Collins, chairman; Acting Asst.-Surgeon A. C. Jones, recorder.

Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine Hospital Service, during the week ended April 24, 1908:

SMALLPOX—UNITED STATES.

California: Berkeley, March 28-April 4, 1 case; Los Angeles, 5 cases; San Francisco, 7 cases.

District of Columbia: Washington, April 4-11, 21 cases.

Illinois: Chicago, April 4-11, 4 cases; Springfield, April 2-9, 5 cases.

Indiana: Indianapolis, March 29-April 12, 6 cases; South Bend, April 4-11, 1 case.

Iowa: Davenport, April 1-30, 11 cases; New London, March 28, 1 case (imported); Ottumwa, April 4-11, 7 cases.

Kansas: Kansas City, April 4-11, 12 cases; Topeka, March 28-April 11, 26 cases; Wichita, April 4-11, 8 cases.

Kentucky: Covington, April 4-11, 3 cases.

Louisiana: Hornbeck, December 20-April 13, 34 cases; Lake Charles, April 14, 2 cases; New Orleans, April 4-11, 14 cases, 2 deaths (imported).

Michigan: Port Huron, March 28-April 11, 5 cases; Saginaw, 4 cases.

Missouri: Kansas City, March 28-April 4, 9 cases; Ozark, February 13-April 13, 17 cases; St. Joseph, March 7-14, 23 cases, 1 death.

Minnesota: Winona, April 4-11, 2 cases.

Nebraska: Fall City and vicinity, to April 9, 13 cases; Nebraska City, April 6-13, 2 cases.

New York: Buffalo, April 4-11, 1 case; Niagara Falls, 3 cases.

Ohio: Chillicothe, March 3-April 15, 18 cases; Cincinnati, April 3-10, 13 cases, 1 death; Murray, March 1-April 3, 25 cases.

Pennsylvania: Sayre, March 14-April 11, 2 cases.

Tennessee: Knoxville, April 4-11, 1 case; Memphis, March 28-April 12, 9 cases.

Texas: San Antonio, April 4-11, 20 cases.

Wisconsin: La Crosse, April 4-11, 6 cases; Racine, 5 cases.

Washington: Spokane, March 28-April 4, 12 cases.

SMALLPOX—FOREIGN.

Arabia: Aden, March 16-23, 2 deaths.

Brazil: Manaos, March 14-21, 3 cases; Rio de Janeiro, March 8-15, 87 cases, 9 deaths.

Egypt: Cairo, March 11-18, 5 cases, 1 death.

France: Paris, March 21-28, 5 cases.

Italy: General, March 26-April 2, 98 cases.

India: Bombay, March 10-17, 44 deaths.

Java: Batavia, February 22-March 7, 10 cases.

Malta: February 29-March 21, 23 cases, 1 death.

Manchuria: Dalny, February 9-15, 1 case.

Mexico: City of Mexico, February 22-March 7, 11 deaths.

Portugal: Lisbon, March 21-28, 4 cases.

Russia: Odessa, March 21-28, 5 cases; Warsaw, February 1-8, 9 deaths.

Spain: Almeira, February 1-29, 6 cases; Vigo, March 1-28, 2 cases.

Turkey: Bagdad, February 22-29, 40 cases, 8 deaths; Constantinople, March 15-22, 3 deaths; Smyrna, January 1-28, 10 cases, February 1-29, 6 cases.

YELLOW FEVER.

Brazil: Manaos, March 7-21, 6 cases, 5 deaths; Para, March 21-28, 2 cases, 2 deaths.

CHOLERA.

India: Madras, March 7-13, 4 deaths; Rangoon, February 29-March 7, 2 deaths.

PLAGUE—INSULAR.

Hawaii: Hilo, April 6, 1 death.

PLAGUE—FOREIGN.

Africa: Gold Coast: Akkra, January 11-March 3, 114 deaths; Brewa, 19 deaths; Ninnyano, 5 cases; Tema, 9 deaths.

Australia: Brisbane, February 1-8, 2 cases; Sydney, February 24-March 2, 1 case.

Brazil: Para, March 21-28, 1 case, 1 death; Rio de Janeiro, March 8-15, 1 case, 1 death.

Ecuador: Quayaquil, March 30, present; Quito, vicinity, March 21, present.

Egypt: General, March 10-17, 19 cases, 7 deaths; Alexandria, 1 case.

India: General, February 22-29, 7,403 cases, 5,945 deaths; February 29-March 7, 8,103 cases, 6,854 deaths; March 7-14, 8,048 cases, 6,739 deaths; Bombay, March 10-17, 306 deaths; Rangoon, February 29-March 7, 29 deaths.

Peru: Callao, March 4-11, 3 cases; Catacaos, 1 case; Chepen, 1 case, 1 death; Chiclayo, 2 cases, 2 deaths; Eten, 1 case, 4 deaths; Ferrenhafe, 2 cases; Lima, 4 cases, 3 deaths; Mollendo, 4 cases, 3 deaths; Trujillo, 39 cases, 15 deaths.

Turkey in Asia: Kerbela, March 13, 2 cases.

Marriages

JOHN JOSEPH EGAN, M.D., to Miss Theckla Gensler, both of Chicago, April 20.

HOWARD F. SCHULTZ, M.D., to Miss Maud List, both of Philadelphia, April 15.

CHARLES S. COCHRAN, M.D., Follansbee, Ohio, to Miss Bady of Mannington, W. Va.

HENRY SYKES, M.D., to Miss Elizabeth M. Bergan, both of Philadelphia, April 16.

MARTIN OLSON, M.D., Chicago, to Miss Inga Aagot Rovelof Elgin, Ill., April 22.

WILLIAM CARSON, M.D., to Mrs. Martha Melson, both of Shelbyville, Mo., April 9.

ALBERT CHARLES GEYSER, M.D., to ANNE S. HIGBIE, M.D., both of New York City, April 15.

JAMES LYNCH, M.D., Baltimore, to Miss Anne Imboden Duff, at East Nashville, Tenn., April 15.

HARRY MERRIMAN STUMPF, M.D., to Miss Bessie Wardell Foster, both of Baltimore, April 15.

EUGENE HERBERT ROBERTSON, M.D., to Miss Elinor Agnes Brown, both of Boulder, Colo., April 14.

ELMER D. SNYDER, M.D., Onward, Ind., to Miss Catherine Slipher of Delphi, Ind., at St. Joseph, Mich., April 15.

ASSISTANT SURGEON RENIER J. STRAETEN, U. S. Navy, Guam, to Miss Emeretta Root of Washington, D. C., April 12.

LIEUTENANT COMMANDER GEORGE AUGUSTUS LUNG, M.D., U. S. Navy, to Miss Helen Van Courtland De Peyster of New York City, April 28.

Deaths

James King Crook, M.D. New York University Medical College, New York City, 1880; a member of the American Medical Association, New York Academy of Medicine and National Association for the Prevention and Cure of Tuberculosis; clinical assistant, instructor and adjunct professor of clinical medicine at the New York Post-Graduate School from 1883 to 1904; visiting physician to the Post-Graduate Hospital and physician to the Outdoor Department of Bellevue Hospital and St. Mary's Hospital; a delegate in 1896 to the Pan-American Medical Congress in Mexico, and in 1897 and 1903 a delegate to the British Medical Association; died at his home in New York City, April 15, from pneumonia, after a brief illness, aged 49.

Cola H. Peete, M.D. Vanderbilt University, Medical Department, Nashville, Tenn., 1892; a member of the American Medical Association, Tri-State Medical Society of Georgia, Alabama and Tennessee, and American Laryngological, Rhinological and Otological Society, and formerly president of the Macon (Ga.) Medical Society; a member of the medical board and oculist and aurist to the Macon Hospital, Georgia Academy for the Blind and South Georgia Orphans' Home; one of the leading specialists of Macon, Ga.; died at his home, April 13, after a long illness, aged 45.

Hugh McColl, M.D. Bellevue Hospital Medical College, New York City, 1871; for many years a member of the American Medical Association; local surgeon to the Grand Trunk Western Railway; a practitioner of La Peer, Mich.; who retired from practice in 1906 on account of his health and moved back to his old home in London, Ont., and in January of this year presented his medical library to the Western Medical College, London; died at his home in that city, April 19, aged 63.

Norwood Kincaid Vance, M.D. University of Maryland School of Medicine, Baltimore, 1882; a member of the American Medical Association; formerly councilor of the fourth Louisiana district; formerly of Shreveport, and later of Puerto Cortez,

Honduras; died in the Kimball Hotel, Atlanta, Ga., March 31, from the effects of a gunshot wound of the breast, said to have been self-inflicted while despondent on account of ill health, aged 48.

Richard Armstrong, M.D. Jefferson Medical College, Philadelphia, 1854; a member of the American Medical Association; vice-president of the Jefferson Alumni Association; formerly vice-president of the Medical Society of the State of Pennsylvania; president of the board of trustees of Lock Haven Hospital; died at his home in Lock Haven, Pa., April 17, from atheroma and cardiac asthma, aged 75.

Joseph Henry Edwards, M.D. Birmingham (Ala.) Medical College, 1897; a member of the Medical Association of the State of Alabama and Jefferson County Medical Society; city physician of Wylam and president of the local board of education; died April 16 at the Davis Infirmary, Birmingham, from cerebral hemorrhage, said to have been due to a fall from his horse three days before.

Jonathan B. Hawk, M.D. Hahnemann Medical College and Hospital of Chicago, 1883; for several years a member of the pension examining board of Hall County, Neb.; coroner of Hall County, and chief surgeon of the Grand Island Soldiers and Sailors' Home; a veteran of the Civil War; died at his home in Grand Island, April 14, from intestinal obstruction, after an illness of ten days, aged 62.

Joseph B. Ross, M.D. University of Greifswald, Germany, 1881; for 14 years a practitioner of Australia; a member of the Missouri State Medical Association, and once vice-president of the St. Louis Medical Society of Missouri; died at the home of his brother in Westphalia, Germany, April 15, from heart disease, after a long illness, aged 50.

Ralph S. Wilder, M.D. Dartmouth Medical School, Hanover, N. H., 1902; for five years a member of the staff of the Medfield (Mass.) Insane Asylum; was found dead in his room in that institution, April 15, from the effects of a gunshot wound of the head, supposed to have been self-inflicted, while despondent from ill health, aged 30.

Franklin Pierce Moore, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1874; of Lisbon, Ohio; a member of the American Medical Association and a charter member of the Columbiana County Medical Society; died in San Antonio, Texas, April 14, from tuberculosis, after a prolonged illness, aged 56.

Henry T. Legler, M.D. University of Leipsic, Germany, 1844; who participated in the Saxon Rebellion of 1848 and was expatriated; brigade surgeon in the federal service during the Civil War; formerly physician of Alameda County, Cal.; died at his home in Oakland, Cal., April 14, after an illness of one week, aged 88.

Charles H. Hubbard, M.D. Yale Medical School, New Haven, Conn., 1860; a member of the Connecticut and Middlesex County medical societies; for many years town health officer and medical examiner of Essex; died at his home in that town, April 12, from cerebral hemorrhage, after an illness of three days, aged 71.

William Jackson Gamble, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1881; a member of the Medical Society of the State of Pennsylvania and Washington County Medical Society; died at his home in Gastonville, April 14, from pneumonia, after an illness of ten days, aged 55.

William F. Wergen, M.D. College of Physicians and Surgeons, Chicago, 1904; formerly of Lead, S. D.; one of the medical assistants at the Ottawa (Ill.) Tent Colony for Tuberculosis; died at the home of his parents in Ottawa, April 16, from tuberculosis, after an illness of more than three years, aged 28.

Ecmin B. Rentz, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1870; a member of the American Medical Association; formerly a practitioner of Forest Grove, Ore., but for the last two years a planter of Drewy's Bluffs, near Richmond, Va.; died recently, aged about 60.

Charles Francis Magers, M.D. Starling Medical College, Columbus, Ohio, 1896; a member of the American Medical Association and a prominent young practitioner of Tiffin, Ohio, died at his home in that city, April 12, from general nervous breakdown after an illness of several months, aged 37.

James Stephenson, M.D. McGill University Medical Faculty, Montreal, 1859; a veteran practitioner of Iroquois, Ont.; reeve of the town for many years, and a member of the Dundas County Council, and local surgeon to the Grand Trunk System; died at his home in Iroquois, April 13, aged 73.

Charles W. Ellis, Jr., M.D. Detroit (Mich.) College of Medicine, 1889; a member of the Michigan State and Saginaw County Medical Societies; a member of the staff of St. Mary's Hospital, Saginaw, and surgeon to the local traction company; died at his home, April 18, from pneumonia, aged 45.

Henry Bennett Gammon, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1898; of Hastings, Mich.; a member of the American Medical Association; contract surgeon U. S. Army from 1898 to 1899; died at the West Side Hospital, Chicago, April 21, aged 39.

Wallace Rouse, M.D. University of Texas, Medical Department, Galveston, 1902; a member of the State Medical Association of Texas and Galveston County Medical Society; lecturer and demonstrator at his alma mater; was killed by lightning, April 21, while fishing, aged 33.

Thomas J. Finley, M.D. Medical Department of the Tulane University of Louisiana, New Orleans, 1904; demonstrator of bacteriology in the New Orleans College of Dentistry; died at his home in that city, April 18, from acute nephritis, after an illness of one week, aged 41.

Armistead Leftwich, M.D. Medical College of Virginia, Richmond, 1884; for several years coroner of Henrico County; physician to the Henrico County (Va.) Almshouse; a member of the Church Hill Medical Association; died in his office in Richmond, April 15, aged 50.

William G. Patterson, M.D. Miami Medical College, Cincinnati, 1855; one of the oldest practitioners of the Ohio Valley; overseer of the poor of Cincinnati during the Civil War; died at his home in that city, April 17, from paralysis, after an illness of three years, aged 93.

Alexander McLeod Sommerville, M.D. Medical School of Harvard University, Boston, 1872; of Hatfield's Point, Kings County, Ont.; died at the home of his daughter in Rothesay, Ont., March 9, after an illness of two months, from heart disease and diabetes, aged 58.

Howard S. Straight, M.D. Western Reserve University Medical College, Cleveland, 1885; of Cleveland, Ohio; an eye and ear specialist; died April 14, in a hospital in New York City, while on his way home from Europe, after a prolonged illness, aged 50.

George R. Cox, M.D. Jefferson Medical College, Philadelphia, 1895; of Beaman, Mo.; died at the home of his sister in Sedalia, Mo., April 16, from the effects of a gunshot wound of the heart, believed to have been self-inflicted with suicidal intent.

Andrew J. McIntosh, M.D. Cincinnati College of Medicine and Surgery, 1869; a member of the American Medical Association; died at his home at Allendale, Ill., April 10, from cerebral hemorrhage, aged 73.

George P. Weaver, M.D. University of Pennsylvania, Department of Medicine, Philadelphia, 1875; died at his home in Philadelphia, April 11, from septicemia, following amputation of the leg, aged 75.

Orion W. Toby, M.D. Eclectic Medical Institute, Cincinnati, 1873; health officer of Perry township, Montgomery County; died suddenly at his home in Pyrmont, Ohio, April 14, aged 58.

James D. R. McKenzie, M.D. University of Michigan, Department of Medicine and Surgery, Ann Arbor, 1869; died at his home in Milnor, N. D., April 12, aged 67.

John Wilson Robie, M.D. College of Physicians and Surgeons in the City of New York, 1861; died at his home in New York City, April 16, aged 71.

Sarah J. Hogan, M.D. Bennett College of Eclectic Medicine and Surgery, Chicago, 1886; died at her home in that city, April 23, aged 83.

Charles Jefferson Towne (Examination, Mass., 1894), died at his home in Essex, Mass., April 16, after an illness of four weeks, aged 67.

W. H. Reed, M.D. Curtis Physio-Medical Institute, Marion, Ind.; died at his home in Hartford, City, Ind., February 18, aged 54.

Deaths Abroad.

F. Terrier, M.D., professor of surgery at the University of Paris until last year; editor of the *Revue de Chirurgie;* died in Paris, April 9, aged 71. He was one of the leading French surgeons and writers on surgical topics, and was a pioneer in preaching asepsis.

L. Gigli, M.D.; assistant at the Maternity at Florence, Italy; the inventor of the wire saw and the first to propose pubiotomy, the extramedian division of the pubic bone, to enlarge the pelvis; died at Florence, April 9, aged 42.

Society Proceedings

COMING MEETINGS.

AMERICAN MEDICAL ASSOCIATION, CHICAGO, JUNE 2-5.

Kansas Medical Society, Iola, May 5-7.
Ohio State Medical Association, Columbus, May 6-8.
American Therapeutic Society, Philadelphia, May 7-9.
American Association of Physicians, Washington, May 12-13.
State Medical Association of Texas, Corpus Christi, May 12.
Utah State Medical Association, Salt Lake, May 12-13.
Louisiana State Medical Society, Alexandria, May 12-14.
Montana State Medical Association, Butte, May 13-14.
Arkansas Medical Society, Little Rock, May 13-15.
West Virginia State Medical Association, Clarksburg, May 13-15.
New Hampshire Medical Society, Concord, May 14-15.
Oklahoma State Medical Association, Sulphur, May 12-14.
Illinois State Medical Society, Peoria, May 19-21.
Missouri State Medical Association, Springfield, May 19-21.
Nebraska State Medical Association, Lincoln, May 19-21.
North Dakota State Medical Association, Grand Forks, May 20-21.
Iowa State Medical Society, Des Moines, May 20-22.
Rhode Island Medical Society, Providence, May 26.
Connecticut State Medical Society, New Haven, May 27-28.
American Pediatric Society, Delaware Water Gap, May 26-28.
American Gynecological Society, Philadelphia, May 26.
American Academy of Medicine, Chicago, May 30-June 1.
American Association of Medical Examiners, Chicago, June 1-2.
American Gastro-Enterological Association, Chicago, June 1-2.
American Proctologic Society, Chicago, June 1.
American Urological Association, Chicago, June 1.
National Congress of State Medical Examining and Licensing Boards, Chicago, June 1.
American Orthopedic Association, Chicago, June 4-6, 1908.

TENNESSEE STATE MEDICAL ASSOCIATION.

Seventy-fifth Annual Meeting, held at Knoxville, April 14-16, 1908.

(*Continued from page 1372.*)

Diagnosis and Treatment of Appendiceal Infections.

DR. W. D. HAGGARD, Nashville, summarized by saying: 1. That the treatment of appendicitis should be surgical operation in all well-marked cases as soon as the diagnosis is made within the first twenty-four or forty-eight hours, if possible. 2. Immediate operation in cases which have apparently been doing well, but suddenly have chill or a drop in temperature, with rise of pulse. 3. Moderately severe cases seen on the third to fifth day which have not had the benefit of early operation, and especially if there is any special contraindication to operation, are given their best chance by the Ochsner method. 4. Cases seen when the process is distinctly abating are treated in the above manner and operation deferred until the attack has completely subsided. 5. Cases with well-defined abscesses seen on or about the end of the first week can often be watched a few days if there is any opportunity of the abscess becoming adherent to the abdominal wall. If this occurs adhesions are quite competent at the end of the tenth day and evacuation should be practiced, but the appendix left alone, unless it is easily seen and very accessible in the abscess cavity. 6. In general peritonitis a short operation with quick removal of the appendix, no irrigation, a large glass tube in the pelvis above the pubes, the patient in the Fowler position and the "blood-washing," continuous enema of salt solution is the best treatment. Where the abscess is not adherent to the abdominal wall, the entire field should be walled off with gauze before opening and sponging it dry. Irrigation should not be used. 7. Cases after one attack are safer with operation in the interval than to wait for another attack.

DR. B. MERRILL RICKETTS, Cincinnati, said that 64 surgeons, representing 80,251 operations, reported about 60 cases of hemorrhage from one or more branches of the vessels of the appendix. Twenty lantern slides were given to illustrate the various methods of ligating the stump. His conclusions are that simple ligature with silk is the quickest and safest method.

Salicylate of Mercury in Syphilis.

DR. J. W. HANDLY, Nashville, described the use of intramural injections of salicylate of mercury in the treatment of this disease, and said it is applicable in all stages, the intervals being governed by the results obtained. In deep ocular lesions, as retinitis, chorioiditis, iritis, he finds the deep injections especially effective, particularly when combined with the iodids. To summarize, intramural injections are best for the following reasons: 1, Accuracy of dosage; 2, better control of patient; 3, secrecy of treatment; 4, no gastrointestinal disturbance; 5, little tendency to salivation which can be quickly controlled; 6, patient can not give remedies to other patients, thereby cutting out the other fee of the physician; 7, patient is not forced to take three doses a day, but one injection every seven to ten days; 8, no smearing over the body with a filthy ointment, a tale bearer to those around him; 9, the greatest good to the patient with the smallest amount of trouble.

DISCUSSION.

DR. JERE L. CROOK has tried this treatment in three cases, and in one of tertiary syphilis he obtained fine results. It is very essential to get a good syringe for these injections.

DR. LEROY said mercurial injections are the surest and infinitely the most rapid method at our command. They do not disorganize digestion, and a good digestive system is one of the best assets that a man has in the overcoming of a syphilitic infection.

Snoring and Mouth Breathing.

DR. G. E. VAUGHAN, Clarksville, said the most frequent cause of mouth breathing in a child is adenoids and enlarged tonsils. The next is hypertrophic or intumescent rhinitis, and he called particular attention to this, as it is frequently neglected. The enlarged turbinate is considered frequently to be the result of adenoids and tonsils, and yet it does not always disappear after their removal. So he is constrained to think that the enlarged turbinate, adenoids and tonsils are all the result of some condition, and not always dependent on each other. A grievous mistake is made by not following up cases on which operations have been done for adenoids and tonsils and seeing to it that nasal obstruction is completely relieved and normal breathing established.

Treatment and Prevention of Tuberculosis by Tuberculin Immunization.

DR. WILLIAM LITTERER, Nashville, stated that (1) experiments on animals demonstrate the possibility of creating immunity to tuberculosis by the use of the tuberculins. (2) The time is not far distant before individuals showing a tuberculous tendency will submit themselves to the repeated injections of some form of tuberculin as a means of prophylaxis against this disease. (3) The clinical method in the administration of tuberculin is far preferable to the one advocated by Wright in which the estimation of the opsonic index is essential. (4) Tuberculin therapy is proving an essential aid in the treatment of tuberculosis, especially as an adjuvant to the hygienic, dietetic, open-air treatment.

DISCUSSION.

DR. LOUIS LEROY thinks some members of the profession have gone mad over opsonic therapy and have followed opsonic work further than they have been justified. The opsonic portion is simply an attachment to the value obtained from vaccine therapy. The advantage to be obtained from the injection of bacterial products has been known for many years, and it was only in casting about for a method to control this that the work of Wright was developed.

Tuberculosis.

The membership of the Tennessee State Committee of the International Congress on Tuberculosis presented a symposium on tuberculosis. Papers were read as follows: "Prophylaxis in Tuberculosis," by Dr. Y. L. Abernathy, Hill City; "Experimental Tuberculous Peritonitis," by Dr. William Litterer, Nashville; "Tuberculosis of the Cervical Lymphatic Nodes," by Dr. W. A. Bryan, Nashville; "How Best to Utilize the Knowledge of the Communicability of Tuberculosis," by Dr. H. P. Coile, Knoxville; "The Marriage and Intermarriage of Tuberculous Subjects," by Dr. I. A. McSwain, Paris; "Bovine Tuberculosis," by Dr. M. Jacob, Knoxville.

Significance of Uterine Hemorrhage.

DR. L. E. BURCH, Nashville, said that every case of uterine hemorrhage should be subjected to an immediate vaginal examination; that the vast majority of cases having this symptom are due to pelvic pathology, and that by carefully con-

sidering cancer, extra-uterine pregnancy, abortion, endometritis and fibroid tumors, and then by a process of exclusion a correct diagnosis can usually be made. When pelvic pathology is discovered it is generally necessary to resort to surgery to effect a cure.

Movable Kidney.

DR. WILLIAM D. SUMPTER, Nashville, said that the frequency of movable kidney demands careful examination of position of the kidneys in vague abdominal pain. He spoke of the relation of movable kidney as a causative factor in appendicitis, diseases of the biliary passages, disturbances of the gastrointestinal tract, etc. He discussed the diagnostic methods of examination and the importance of differential diagnosis; palliative treatment, with its results; the indications for operative treatment; choice of incision; method of fixation, and the anatomic and therapeutic results of operation.

Papers were likewise read as follows: "Retention of Urine in a Female Infant Nine Weeks Old," by Dr. T. J. Happel, Trenton; "Some Symptoms Produced by Appendicitis," by Dr. W. A. Bryan, Nashville; "Herniotomy," by Dr. George R. West, Chattanooga; "Conservative Surgery in Crushing Injuries," by Dr. Jere L. Crook, Jackson; "Diseases of the Frontal Sinus and Their Surgical Treatment," by Dr. C. M. Capps, Knoxville; "Ethics," by Dr. J. M. Kennedy, Knoxville; "Purulent Ophthalmia," by Dr. M. M. Cullom, Nashville; "The Treatment of Detachment of the Retina, with Reports of Cases," by Dr. L. B. Graddy, Nashville, and "Adenoids," by Dr. C. H. Davis, Knoxville.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Regular Meeting, held March 11, 1908.

The President, DR. A. M. EATON, in the Chair.

SYMPOSIUM ON NOSTRUMS AND NOSTRUM PRESCRIBING.

Nostrum Prescribing—Its Cure.

PROF. JOSEPH P. REMINGTON believes that the practice of prescribing nostrums by physicians is decreasing, and that with persistent activity the sale and use of nostrums will be greatly curtailed. Little good will be accomplished by a propaganda of abuse of personal vilification, but far more by presenting to physicians a reasonable and effective alternative, with a campaign of education, which will present facts alone, studiously avoiding sensational and exaggerated statements, intended to inflame public opinion and terrorize the masses. The old idea of mystery in the preparation of medicines, the writer observes, lies at the foundation of the nostrum traffic, and that science is ever the foe of mystery and secrecy. That secrecy is not essential in securing commercial success has been shown by the splendid example of Dr. Edward R. Squibb, who willingly published his processes and threw open his laboratory doors to the inspection of the medical and pharmaceutical professions at a time when his competitors closely guarded their secrets, and yet he died a rich man, not only in worldly effects, but in the satisfaction that his labors had benefited a multitude. His example is now being followed by the best manufacturing pharmacists, and the best and largest concerns are giving freely to the committee of revision of the U. S. Pharmacopeia information heretofore withheld. This spirit can be encouraged by physicians "by never prescribing a remedy the composition of which is not known to them."

The cure for nostrum prescribing is said to be: 1, Education; 2, application and close study of the therapeutic effects of the preparations of the U. S. Pharmacopeia and National Formulary and such unofficial agents of known composition as are now available.

Nostrums in Dosage Form.

MR. M. I. WILBERT said that the advent and popularity of nostrums in the form of factory made prescriptions is the direct cause of at least three of the highly objectionable conditions present to-day. In the order of their importance they are: 1. A pernicious and widely developed medicine habit on the part of the great American public. 2. An all too evident lack of self-confidence and a want of knowledge of how to formulate a satisfactory prescription, for active medicaments, on the part of the physician. 3. The loss of interest and skill in compounding, controlling and dispensing, on the part of the pharmacist or retail druggist.

Of the first of these conditions it was asserted that among the more potent drugs popularized in this exploitation are acetanilid, phenacetin, chloral and its derivatives, the bromids, strychnin, sulphonal, trional, veronal, cocain, eucain, heroin, codein and a number of others scarcely less injurious, to say nothing of the alcohol presented in insidiously attractive forms. Of the second condition, the efforts in combating the evil are best illustrated in the method of teaching pharmacology and therapeutics in the medical schools of Harvard, Western Reserve, Cornell and Pennsylvania universities. For signs of progress on the part of medical men in actual practice it is but necessary to point to the work being done in connection with the American Medical Association. The third condition is regarded by the author as most serious, not alone because it has not yet been recognized or appreciated by the pharmacists themselves, but also because it appears to have been all but overlooked by the medical profession and the community at large.

Mr. Wilbert argues that if the standards of the Pharmacopeia are reasonable, every pharmacy or drug store that essays to dispense physicians' prescriptions should contain a copy of the latest edition of the Pharmacopeia and of the National Formulary, also that the persons in charge should be fully capable and have at their command the necessary apparatus to apply all of the pharmacopeial tests and to make all of the official preparations strictly in accordance with the directions as laid down in these standards. In conclusion, Mr. Wilbert read the following proprietary names under which castor oil and phenolphthalein are offered for sale: Castol, castolax, castoline, castorol, castormel, cholelith, dulcinol, laxans, laxatin, laxatol, laxarol, laxathalen, laxatolin, laxiconfect, laxoin, laxophen, laxaline, laxatine, laxomel, lazarome, laxol, laxora, laxolia, purgo, purgol, purgen, purgella, purgolade, purgylum, purgatin, purgativa, parathalen, probilin, ricinol, saccharol.

The Relative Frequency in the Prescribing of Proprietary Medicines Up to 1905.

MR. AMBROSE HUNSBERGER traced the rapid growth of the habit of prescribing proprietary preparations from the earliest available records, those gathered in 1875, to the chaotic period of 1905. An investigation of 50,000 prescriptions, reported by Dr. Jacobi, revealed in 1875-80 2 per cent. of proprietaries; 1880-90, 5 per cent.; 1895, 12 per cent.; 1898, 15 per cent.; 1902-03, 25 per cent.

Another investigation, made by members of the American Pharmaceutical Association, residing in widely separated localities in the United States, was reported to that body at its 1905 meeting by Mr. Patch of Boston. This analysis covered 27,000 prescriptions and showed a total of 20 per cent. that called for proprietaries, not including proprietary chemicals such as antipyrin, phenacetin, etc. (which were being advertised heavily at that time), but embracing a class of compounds bearing fanciful and catchy names, many of which are no longer prescribed, yet are enjoying large sales direct to the laity because of their popularization by the medical profession.

A summing up of the reports, supplemented by a general knowledge of conditions, indicates that in 1905 approximately 35 per cent. of the prescriptions written throughout the country called for proprietary products. An interesting point for the "therapeutic nihilist" to consider is the fact that the A. Ph. A. analysis shows calls for 1,777 separate and distinct articles in 27,000 prescriptions, a far cry to "hope and nux vomica." Simple medication appears to have been practiced, since the average number of articles per prescription was but 2.25. The percentage of prescriptions calling for proprietaries varies considerably in different sections of the same locality. Jacobi reports 70 per cent. of the prescriptions of reputable physicians, compounded at a "gaudy" drug store, as calling for proprietaries. Chicago and Boston report similarly. The low

percentages are found in the "family drug store," honored in its community and having the confidence of the good old "family doctor." Jacobi pertinently says "Clear your own skirts, professors and doctors."

The Legal Safeguards Surrounding U. S. P. and N. F. Preparations.

MR. W. L. CLIFFE said that there are no standards for the quality of proprietary medicinal compounds other than those that are self-imposed on the maker, and that it has been repeatedly shown that alteration in the character and content of this class of medicinal products is of frequent occurrence. Statutory requirements in state and federal laws do not interfere in this changing of formulæ, except in the case of a dozen or so specifically named narcotic or habit-forming drugs, in which case the actual content of such ingredients must be shown on the label, thus rendering changes in composition as far as the ingredients named are concerned apparent. In the case of the official preparations of the U. S. Pharmacopeia and National Formulary there can be no legally permissible deviation from the formulæ, standards and tests laid down in those authorities on the part of the dispenser, when such preparations are ordered by prescription, because the laws of the various states and territories as well as the federal statutes demand conformity.

In regard to the effectiveness of the administration of these laws, it is said that bureaus of departments, health and drug commissions are slowly but surely being put into a state of organization for this purpose. Quotations from the various statutes were made by Mr. Cliffe in substantiation of the statements made.

Results Accomplished by the Propaganda.

MR. CHRISTOPHER KOCH referred to the institution of the propaganda for reform in the prescribing of proprietary remedies by the American Medical Association in 1905 and to the work of the Council on Pharmacy and Chemistry of that association. Reference was also made to the work of the Ethical Preparations Committee. In November, 1906, it was found on investigation that 20.4 per cent. of all prescriptions written in Philadelphia called for proprietaries. In November, 1907, the prescription files of the same stores showed a decrease of one-third in such prescriptions. All sections of the city suffered. West Philadelphia is the worst, and Kensington the least offender. The condition in Kensington is attributed to the fact that joint meetings of physicians and pharmacists have been held, and to the fact that a spirit of good feeling exists between the two professions. In Germantown a large percentage of homeopaths are found prescribing proprietaries. In West Philadelphia there are three cooperative companies with many physicians as stockholders and hundreds of prescriptions for these proprietaries are written daily. The southern end of the city and the central district show some improvement. The north central part of the city contains another cooperative corporation, and, strange to say, one of the hardest workers in the propaganda is a pharmacist in this section. He is obliged to report an increase in spite of all his efforts, due entirely to two physicians practicing in his neighborhood who are members of the corporation.

DISCUSSION.

DR. JAMES M. ANDERS felt that the papers presented should be heartily endorsed by the Philadelphia County Medical Society. While the figures presented on the use of nostrums make the medical profession appear to better advantage than those cited by other observers the situation is still in a measure deplorable. Dr. Anders endorsed the suggestion of Professor Remington for a closer application to the study of the U. S. Pharmacopeia. To this Dr. Anders would add the standard works on materia medica and therapeutics. Certain synthetic proprietary remedies of known composition, in general use and widely approved by the leading members of the medical profession, he believes may be employed as occasion demands. In favor of the National Formulary Dr. Anders said that, while this work gives only unofficial preparations, these have been brought to a common, authoritative standard by the labors of a special committee of the American Pharmaceutical Association, and can now be employed with confidence to meet definite indications, although, as a rule, it is necessary to formulate prescriptions at the bedside. Joint meetings between pharmacists and physicians he believes will not only promote friendly feelings between the two professions, but advance the interests of scientific pharmaceutics and practical therapeutics.

DR. H. A. HARE referred to the general interpretation of a "proprietary" and of a "nostrum," the former embracing those preparations, the ingredients of which are all known, which are not made under a patent, but which bear some official name so that the physician in ordering may get the product of one particular manufacturer; the latter being those secret preparations made under a patent. He claims the right to prescribe anything he pleases for his patients, provided he knows what he is prescribing and has information that leads him to believe it will do good.

DR. S. SOLIS COHEN said that any ready-made mixture is bad, whether it is prescribed by the National Formulary or by a manufacturer. He thinks the real advance is being made in the fact that pharmacists and physicians are uniting on non-secret pharmacy. He is in accord with Professor Remington's paper and with much said by the other gentlemen. He feels that the profession must not suffer itself to use incautious unguarded, overemphatic remarks which can be construed by journals and newspapers into a confession that the medical profession prescribes secret remedies, which it does not, or into an idea that physicians are ignorant of pharmacy and of chemistry, and put unknown concoctions into the stomachs of their patients with the object of destroying their lives which can only be saved by the efficacy of Christian Science and osteopathy.

DR. DAVID L. EDSALL attributed to ignorance the prescribing of nostrums by a certain portion of the profession. This ignorance, he said, is being dissipated by the work of the Council on Pharmacy and Chemistry of the American Medical Association. He feels that the profession should show its disapproval of so-called medicinal foods at present widely used and enthusiastically trusted in by many persons. A report which appeared in THE JOURNAL of the American Medical Association showed that of these foods an amount equal to 20 cents' worth of milk costs from $1.50 to $3.50. He has seen persons in a decidedly starved condition through the use of these substances. He thinks it important that students should be taught therapeutics in small ward classes and in actual work in the wards.

DR. M. H. FUSSELL thinks the crux of the entire nostrum question lies in the queries whether there "are any fixed formulas of drugs necessary or even desirable," and whether it is "not better to use single drugs, or a combination of drugs for each special case?" With these questions answered he thinks that rational physicians and equally intelligent pharmacists can at once meet on a common ground. He feels that the host of nostrums, the myriads of ethical preparations, the many formulas of the National Formulary and the few fixed formulas of the Pharmacopeia are the outcome of a natural desire of the laity for relief, coupled with their inherited belief from ancestors in æons past in the infallibility of drugs in curing diseases. The continued existence of secret preparations he attributes primarily to the lack on the part of physicians to practice the sound principles of therapeutics taught in the best medical schools.

DR. JOHN B. ROBERTS said that to put a dirty scalpel into the brain, abdomen or joint of a patient is a breach of trust. To put an unknown amount of an unknown medicine into his stomach or under his skin is equally censurable. The boast and glory of medicine is its approach to accuracy. Accuracy can only be obtained by a knowledge of the drugs used and the quantities given. The dirty scalpel and the secret remedy may lead to the death of the confiding patient. No honorable and self-respecting physician wishes to vie with the abortionist in causing the death of his patient. All such practices are unbecoming a physician and gentleman and can not be tolerated by the Philadelphia County Medical Society.

Medicolegal

Testimony of Unregistered Physicians Not Excusable—Consent to Removal to Sanitarium Not Inconsistent with Abandoment of Hope.

The Supreme Court of Louisiana holds, in the case of State vs. Howard, that when a witness in a criminal prosecution is offered, and, over the objection that he has not been examined and has not registered as required by act No. 49 of 1894, is permitted to testify, as an expert physician or surgeon, it is no answer to the objection that the testimony is incompetent to say that the facts testified to might have been established by competent testimony, or that the testimony as given "was not strictly that of a medical expert." The act in question provides that practitioners who have not been examined and passed by the state board of medical examiners and have not otherwise complied with its provisions "shall not . . . be allowed to testify as medical or surgical experts in any court of this state."

The court also holds that the fact that a person mortally wounded consents to be removed to a sanitarium for the satisfaction of his wife and children is not inconsistent with his own abandonment of the hope of recovery; and where, on the whole, the evidence justifies the belief that he is impressed with a sense of impending dissolution, his statements may be admitted as a dying declaration.

Physicians Entitled to Compensation as Expert Witnesses.

The Supreme Court of Minnesota says that, in the personal injury case of Anderson vs. Minneapolis, St. Paul & Sault Ste. Marie Railway Company, where the plaintiff recovered a verdict, application was made to the trial court on proper notice for the allowance of witness fees of physicians claimed to have been called as experts at the trial. The court does not think that there was error in allowing the witnesses their fees as experts.

The court says that it was claimed that it was held in Le Mere vs. McHale, 30 Minn., 410, that physicians could not be called as experts when they had been employed professionally to attend the plaintiff, and while so attending him, in the ordinary practice of their profession, acquired personal knowledge of the nature and extent of his injuries. But it certainly was not intended to hold in Le Mere vs. McHale that, simply because physicians and surgeons treat an injured person in their professional capacity, they are thereby precluded from being sworn and examined at the trial as experts to give an opinion on the facts, whether those facts were ascertained wholly or partially as a result of their personal experience in treating the patient. That decision goes no further than to hold that a physician who testified to facts coming under his notice during the performance of his professional duties is not necessarily an expert witness. In that case there was nothing to distinguish the physicians from any other witnesses. In this case it appeared from the motion papers that the physicians and surgeons not only treated the injured man professionally, but were employed so to do for the purpose of making preparation to testify as experts. They made special examination of his injuries, with the intention of acquiring knowledge which should make them the better qualified to testify as to what were the probable results of the injury. Of course, applications of this kind should be carefully scrutinized by trial courts. The statute was not intended to furnish a plaintiff the means of procuring medical treatment at the expense of the party charged with negligence.

In other words, the court holds that physicians and surgeons who testify as witnesses concerning facts coming under their observation while professionally attending a patient, and express opinions with reference thereto, are not necessarily entitled to compensation as expert witnesses. But where physicians and surgeons are engaged to treat and examine an injured person for the purpose of acquiring the knowledge necessary to qualify them as expert witnesses they are not necessarily disqualified as such by the fact that they also treated the patient professionally.

Medical Works Can Not Be Gotten Before Jury by Indirection.

The Supreme Court of Iowa says, in the case of State vs. Blackburn, that medical works are not admissible in evidence, and, when not alluded to in direct examination, can not be gotten before the jury, over objection, on cross-examination, nor can this be done by indirection in assuming their supposed teachings. Therefore, in this case, where a physician had based his opinion solely on his own experience and observation, it was error to cross-examine him on the state of the medical authorities in order thereby to get their supposed teachings before the jury. The range of cross-examination in testing the learning and skill of one who is presented as an expert is largely discretionary, but under that pretext improper evidence or inferences from assumptions not supported by the record ought not to be brought before the jury, especially with the sanction of the court.

Good Bases for Hypothetical Questions.

The Supreme Court of Minnesota holds, in the personal injury case of Masteller vs. Great Northern Railway Company, that the opinion of an expert witness may be based in part on his own testimony as to facts within his personal knowledge and on a hypothetical presentation of other matters not within his knowledge. It says that it is not the rule that under all circumstances a hypothetical question must contain a statement of all the material facts concerning which there is evidence. If a witness was present in court and heard the evidence, he may express an opinion with reference to it, although not set out in the form of a hypothetical question. This is no infringement on the rule that when a physician has not made a personal examination of the patient, and has not heard other witnesses testify with reference to the facts, then the hypothetical question must be based on a statement of all the evidence which was produced at the trial.

Damages for Injuries Causing Consumption.

The Supreme Court of New York, Appellate Division, Second Department, holds, in the personal injury case of Roenbeck vs. Brooklyn Heights Railroad Company, that $9,000 damages is not so excessive as to demand a new trial where a man, earning $40 a week, sustained injuries developing a tubercular condition of the lungs, even if under certain conditions of living he could be cured of the consumption in one to four years.

Damages for Colles' Fracture of Wrist.

The Supreme Court of New York, Appellate Division, Fourth Department, holds, in the personal injury case of Powers vs. Village of Moravia, that the jury was not unreasonable in awarding to a married woman, who earned $5 or $6 working out, $2,000 damages for a Colles' fracture of the right wrist, where, although the bone had united, there was more or less deformity, and the hand had been weakened and fingers stiffened.

Frightening of Pregnant Woman Not Deemed Cause of Death Following Premature Delivery.

The Court of Appeals of Kentucky says that, construing the indictment in the case of Commonwealth vs. Couch most strongly against the accused, it showed that by the discharge of firearms on the public highway he frightened a woman who was quick with child or pregnant, and that by reason of this undue excitement thus brought on she gave premature birth to her child, following which she became sick and later died. Could it be said that her death was either the natural or the probable consequence of the shooting on the highway? The court thinks not.

At common law, and by statutory enactment in many of the states, if one while doing an unlawful act not amounting to felony, unintentionally kills another, he is guilty of manslaughter. It is not necessary that he shall have intended to violate the law in order to constitute the offense; but he must have intended to commit the act which constitutes a misdemeanor.

But the court has been unable to find any case wherein the doctrine has ever been extended as far as the commonwealth asked to have it extended in this case. The most that could be said of the contention of the commonwealth was that the

woman, being pregnant, became badly frightened on account of the unlawful act of the defendant, which brought on or caused her to give premature birth to her child; that following this she became sick, from which sickness she later died. Her sickness was not due to the fright, and could not be said to be either the natural or the probable result of her becoming frightened.

There would be some plausibility in the contention of the commonwealth if the woman had died in the act of childbirth, but such was not the case. Her death may have been due to want of attention following her confinement, or to improper attention, or to disease due to other cause than her fright or confinement; and, this being true, the court is of the opinion that the ruling of the trial judge sustaining a demurrer to the indictment was correct.

Current Medical Literature

AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

Medical Record, New York.

April 18.

1 *Constructive Surgery After Gunshot Wound of Abdomen. W. M. Polk, New York.
2 *A Phenomenal Aortic Aneurism. W. G. Thompson, New York.
3 Case of Recurrent Jaundice; Death in Third Attack from Carcinoma of Pancreas. G. L. Peabody, New York.
4 *Bright's Disease and Its Treatment. O. Lerch, New Orleans.
5 Electromechanical and Thermic Removal of Local Stasis. W. B. Snow, New York.
6 Integrity of Stereognostic Function and of All Forms of Sensation in a Case with a Lesion of Left Parietal Lobe. A. Gordon, Philadelphia.
7 *Fractures of the Tip of the Olecranon Process. F. E. Peckham, Providence, R. I.

1. Extensive Gunshot Wound.—Polk describes an extensive gunshot wound caused by the accidental discharge of both barrels of a shot gun in contact with the body, three layers of clothes only intervening. The contents of the two barrels struck the abdomen at and above the left anterior superior spine of the ilium, and came out at and above the iliosacral joint, tearing away all the soft tissue from the crest of the ilium and the crest itself, above a line drawn from a point one inch back of the anterior superior process, around the outside of the bone to the upper limit of the sacroiliac joint. The joint was not entered, but two transverse processes of vertebræ were blown off and many pieces of detached bone were scattered throughout the soft tissues. The peritoneal cavity was entered, exposing the sigmoid flexure, the lower pole of the left kidney, and the anterior end of the floating rib. It could not at first be determined whether the sigmoid was perforated or not, but in one or two days leakage of gas showed that it had been injured. The lumbar muscle was practically destroyed. As there were no signs of serious hemorrhage and it was recognized that the wound had been practically sterilized by the burning of the discharge, the attending practitioner wisely refrained from overmuch probing or interference, merely removing loose and dead tissue, clothing, etc., and applying a sterile dressing. In about two weeks the patient was taken by train to New York, about 1,000 miles. There it was found necessary to remove the anterior part of the crest of the ilium, which had become denuded of periosteum, and other portions of embedded bone that were found, and zinc plaster was used to narrow the wound. Another operation was performed four months later, anastomosing the under surface of the transverse colon, between the mesocolon and omentum at the junction of the middle and left third of the mesocolon with that portion of the sigmoid which could most easily be brought into apposition. A fourth operation was undertaken, still a year later, to close the intestinal opening and furnish a parietal peritoneum, against which the intestine could rest, thus minimizing chances of adhesion and protecting against ulcerative processes in the exposed intestinal area; to find an external covering for what must be a large hernia; and to devise a means for controlling its extension and future enlargement. The various operations are described in detail. The patient, at the time of report, two years after operation, was in excellent health, able to perform all the duties of life, walking four or five miles a day for recreation; the digestion was excellent, as well as the action of the bowels.

2. Aortic Aneurism.—Thompson reports an abdominal aortic aneurism, of falsely sacculated and dissecting type, measuring 6 by 9 by 11 inches, containing 6½ quarts (3,000 c.c.) of fluid blood and clots, causing marked displacement of the kidneys and erosion of five vertebræ. The patient was able to walk about until within three weeks of his death. The paroxysmal and nocturnal type of pain, noted by Sansom (Twentieth Century Practice, vol. iv, p. 511) as existing when there is erosion of the vertebræ, was a marked feature of the case. Considering the phenomenal size of the mass and the compression and displacements to which it gave rise, it is astonishing that the patient presented so few subjective symptoms.

4. Bright's Disease.—Lerch discusses in detail the etiology, symptoms, pathology and treatment of Bright's disease, and urges attention to the necessity for early recognition of the condition while it is yet in a stage amenable to treatment. He points out that while we are most assiduous in attempting to discover the earliest signs of tuberculosis, even positive symptoms of beginning nephritis are neglected, though that disease is just as certain sooner or later to destroy life.

7. Fracture of Olecranon.—Peckham reports cases of fracture of the tip of the olecranon which tend to show that the general rules of the text-books—that in fracture of the olecranon the arm should be put up in almost complete extension—do not always hold good. On the contrary, there are cases, which the *x*-ray will show, in which there is a riding by of the fragments, the tip being pulled upward and backward by the triceps. To put up the arm in extension would aggravate the deformity, while, on the other hand, by flexing the forearm on the arm leverage is obtained, and with the fragment held as a fixed point by the triceps and ligamentous attachments there is a degree of flexion, varying in each case, which will bring the tip of the olecranon into perfect apposition with the other fragments. He urges, therefore, a careful clinical and *x*-ray study in each case and individual treatment accordingly.

Boston Medical and Surgical Journal.

April 16.

8 *Chronic Obstruction of the Duodenum by the Root of the Mesentery. E. A. Codman, Boston.
9 Acute Yellow Atrophy of the Liver. Report of Two Cases, One with Ascites. W. Tileston, Boston.
10 *Significance of Clinical Histories Before and After Operative Demonstration of the Real Lesion. (Concluded.) M. H. Richardson, Boston.

8. Mesenteric Obstruction of the Duodenum.—The contentions that Codman sets himself to prove in this paper are as follows: 1. In the human being the transverse portion of the duodenum is more or less compressed by the root of the mesentery. 2. Slight anatomic deviations from the normal or certain pathologic conditions may increase this pressure to a varying extent up to the point of complete occlusion of the gut. 3. When this pressure reaches a degree great enough to give more resistance to the muscular efforts of the duodenum than the closed pylorus, the condition becomes of pathologic significance. 4. Thus anatomically the duodenal secretions are brought into contact with mucous membranes unfitted physiologically to withstand their corrosive action. 5. The obstruction favors stasis in the duodenum and thus bacterial invasion of the tissues. 6. If the above propositions can be proved they will materially alter the present conceptions of the etiology and treatment of a variety of pathologic conditions, e. g., hyperchlorhydria, nervous dyspepsia, duodenal and gastric ulcer, pancreatitis, cholelithiasis, persistent vomiting after laparotomy and in pregnancy, and excessive fluid drainage from wounds in the common duct and duodenum. He endeavors to show that facts collected about the duodenum by Dwight in anatomy, Cannon in physiology, Türck in experimental bacteriology, and Ochsner and others in operative surgery, substantiate his contentions, and proceeds to consider each of them in detail.

10. The Significance of Clinical Histories.—Richardson concludes his article from the preceding issue, the general pur-

port of which is to show the value of clinical histories in refined deductive reasoning and how narrow sometimes is the margin between a course in which death is inevitable and one in which recovery is probable. One little variation in reading the history may lead the surgeon off the true course and to irreparable disaster, just as surely as a slight variation in the reading of the compass will make a false course and land the mariner in the breakers. It is our duty, despite our unwillingness to accept always the experience of the past, to call attention to our failures and to insist that better methods be employed. The sailing directions in this course are enumerated by the author as follows: 1. To gain from the patient without suggestions and without leading questions a careful and leisurely statement of the symptoms from the very beginning. 2. To have the patient repeat the history at subsequent visits. 3. To compare these two or more histories. 4. To put questions which will tend to throw light on the patient's voluntary statement. 5. To question the patient as to specific organs and diseases. 6. To bring out in detail family diseases and tendencies as particularly and extensively as in life-insurance histories. 7. To cross-examine the patient on all his statements. 8. To avoid leading questions in all the details of the history. 9. To make use of every reasonable means of physical examination, excepting only those of doubtful efficacy which are painful or distressing. 10. To make repeated deductions from the above data. 11. To demonstrate, when possible, to others, the histories, the physical examination, the diagnosis and the real lesion (as in the clinical lecture). 12. To review the previous history in the light of the operative demonstration. 13. To question and cross-question the convalescent patient, as indicated by the abnormalities, old and recent, demonstrated at the operation. By this means the measurable error in diagnosis in indications and contraindications dependent on diagnosis may be materially diminished.

New York Medical Journal.

April 18.

11 *Colony Sanatorium for the Nervous and Neurasthenic: a Much Needed Work of Philanthropy. G. W. Jacoby, New York.
12 The Most Useful Specialty in Medicine. J. M. Taylor, Philadelphia.
13 Palliative Treatment of Prostatic Hypertrophy. F. Bierhoff, New York.
14 Attempts to Repair the Effects of Great Destruction of the Lids and Orbital Tissues Caused by Disease of the Antrum. B. Chance, Philadelphia.
15 Dislocation of the Neck with Recovery. L. Lofton, Emporia-Belfield, Va.
16 Principles of the Climatic Treatment of Children. F. Wachenheim, New York.
17 A Retrospect in Phthisiotherapy. H. F. Stoll, Hartford, Conn.
18 External Urethrotomy for Acute Retention of Urine Caused by Impaction of a Vesical Calculus in the Penile Portion of the Urethra. F. T. Woodbury, Camp Jossman, P. I.
19 Case of Multiple Tapeworm Infection. R. L. Wilson, New Orleans.

11. This subject is discussed editorially in THE JOURNAL, this issue.

The Lancet-Clinic, Cincinnati.

April 11.

20 Choice of an Anesthetic. S. Iglauer, Cincinnati.
21 *Alimentary Albuminuria. A. C. Croftan, Chicago.
22 When the Baby Is Born. T. A. Frazier, Marion, Ky.

21. **Alimentary Albuminuria.**—Croftan discusses the explanation of the phenomenon, and in regard to diagnosis says that the use of specifically precipitating sera in any form of albuminuria occurring with or without nephritis following the ingestion of large amounts of albumin in normal individuals, or of smaller amounts in persons suffering from dyspeptic disorders, should aid in clearing up the pathogenesis of this particular albuminuria. If it is found that the native albumin as such is eliminated, then the administration of digestive ferments or the withdrawal of this particular form of albumin should lead to the cessation of the albumin excretion. From a life-insurance standpoint this is particularly important, for applicants suffering from this form of albuminuria might present themselves for insurance examination and might be rejected for a nephritis, when, as a matter of fact, they may be suffering merely from a transitory digestive disorder. The prognosis in this form of albuminuria is, of course, very much more favorable than in any other form that comes under observation.

Medical Fortnightly, St. Louis.

April 10.

23 Longevity. A. S. Ashmead, New York.
24 Glimpses of Early St. Louis Medical History. W. B. Outten, St. Louis.
25 *Aprosexia: Some Eye, Ear, nose and Throat Facts in Child Development. E. E. Clark, Danville, Ill.
26 Influence of Gynecologic Operations on the General Organism. P. Findley, Omaha, Neb.
27 The Island of Java. R. G. Eccles, Brooklyn, N. Y.
28 Atheroma Therapeutics. W. C. Abbott, Chicago.
29 *Hysteria in Children. G. E. Price, Philadelphia, Pa.

25. **Aprosexia.**—Clark considers aprosexia, which, he says, may depend on an inherited, weak and vicious mind, on animal instincts so strong that even slight mental exertion may be quite beyond the child's capabilities, but most often of all on some physical ailment or defect. A large proportion of such defects are due to conditions of the eye, ear, nose and throat. The most frequent of these are amblyopia from uncorrected refractive errors, otitis media, perforations of the membrana tympani, mastoid disease, disease of the ossicles, and adenoids. He points out that ailments unaccompanied by pain are very apt to go unrecognized. The medical profession, besides realizing the importance of these conditions themselves, should see to it that parents and teachers are instructed on the point.

29. **Hysteria in Children.**—Price discusses the symptoms, diagnosis and treatment of hysteria in children. The diagnosis depends on the history, the absence of other adequate cause, and the presence of so-called hysterical stigmata. These stigmata represent certain of the sensory changes, and, briefly enumerated, are as follows: Areas of cutaneous hyperesthesia along the spine, under the breasts, and over the inguinal regions (the two last named being, as a rule, most marked on the left side), glove-like and stocking-like anesthesia or hypesthesia of the extremities, anesthesia of the retinæ causing contraction of the visual field and anesthesia of the pharynx and conjunctiva and the choking sensation—the common "globus hystericus." But it must be remembered that the presence of hysterical stigmata in a given case does not rule out the possibility of a more serious condition being present. Price describes four cases representing the hysterical tremor (unusual), the hysterical joint type, the psychic type, and the visceral type, the latter in a case of hysterical dyspnea.

Surgery, Gynecology and Obstetrics, Chicago.

March.

30 *Technical Methods of Performing Certain Cranial Operations. H. Cushing, Baltimore.
31 Fibromyomata. Study of Degenerations, Complications and Associate Conditions in 3,561 Cases. S. E. Tracy, Philadelphia.
32 *Acquired Atresia of the Common Duct Due to Gallstones. J. C. Hancock, Dubuque, Iowa.
33 *Hematuria in Pregnancy. E. A. Balloch, Washington, D. C.
34 *Tuberculosis of the Patella. J. B. Murphy, Chicago.
35 *Prophylactic Use of the Filigree in Infected Wounds of the Abdominal Wall. W. Bartlett, St. Louis.
36 *Differential Diagnosis of Duodenal Ulcer and Gallstones. W. D. Haines, Cincinnati.
37 *Preparatory and Postoperative Treatment. J. E. Moore, Philadelphia.
38 New Form of Surgical Adhesive Plaster. C. L. Leonard, Philadelphia.
39 *Treatment of Fibroid Tumors Complicated by Pregnancy. L. E. McMurtry, Louisville, Ky.
40 *Case of Tuberculosis of the Tongue. W. A. Harsha, Chicago.
41 Case of Interscapulothoracic Amputation for Sarcoma of the Face. E. M. Hasbrouck, Washington, D. C.
42 Case of Degenerated Uterine Myoma. F. A. Vander Veer, Albany, N. Y.
43 Stab Wounds of Fetus *in Utero*. D. A. K. Steele, Chicago.
44 Case of Ovarian Hernia. R. A. Boldt, Cleveland, Ohio.
45 *Intraglandular Enucleation of Goiter. J. L. Reverdin, Geneva, Switzerland.

30. This article appeared in the *Interstate Medical Journal*, February, 1908, and was abstracted in THE JOURNAL, April 11, 1908, page 1221.

32 and 33. Abstracted in THE JOURNAL, Jan. 25, 1908, pages 308 and 310.

34. **Tuberculosis of the Patella.**—Murphy notes the surprising infrequency of tuberculosis of the patella in view of the comparative frequency of tuberculosis of the knee joint. The immunity of the patella is probably due to absence of an

watched carefully, as its effects are decidedly depressing in literature of the subject. The primary focus generally develops during the period of most active growth of sesamoid bone, namely, early adult life. Infection is more dependent on the degree of virulence or the absence of opsonin or individual resistance, than on the number of bacilli. A tuberculous focus may open externally into the prepatellar bursa or internally into the joint, which is most common. The age of incidence varies greatly. The symptoms are divided by Forget into periods of (a) pain; (b) abscess formation; (c) fistulous tract. The diagnosis in primary tuberculosis is often difficult. In Murphy's clinic a 0.1 c.c. of old tuberculin in 10 c.c. of a 0.5 per cent. solution of carbolized water, of which 7½ minims are equal to 5 mg. of tuberculin, is used for diagnostic purposes. He considers the ocular tuberculin reaction, however, simpler, more effective, and less disagreeable. Differential diagnosis calls for exclusion of cold prepatellar abscess, lupus and chronic prepatellar bursitis with infection. If the cavity is small the sequestrum can be removed, the cavity curetted, and filled with iodoform wax, or the glycero-gelatin-formalin plug, the preparation of which is described. In other cases, the patella should be extirpated *in toto;* it is not essential for perfect mobility and function of the joint, and by employing the subaponeurotic removal of the patella, if possible, the bone may be reproduced. He describes the technic and reports cases with illustrations.

35, 37, 40. Abstracted in THE JOURNAL, Feb. 1, 1908, pages 393, 394, 397.

36. Abstracted in THE JOURNAL, Jan. 18, 1908, page 232.

39. Abstracted in THE JOURNAL, Jan. 25, 1908, page 309.

45. **Intraglandular Enucleation of Goiter.**—Reverdin says that in his opinion intraglandular enucleation is indicated in every case in which it can be carried out without danger. It should be given preference in all enucleable tumors, liquid or solid, which are not excessively vascular, and when the connections of the tumor with the enveloping gland have not been modified by irritants or inflammation. Partial thyroidectomy should be reserved for diffuse neoplasms or for very vascular adenomata, or such as have become adherent to their glandular envelope. Intraglandular enucleation of goiters or the Porta-Socin operation presents the following advantages: It does not expose neighboring structures (recurrents, etc.) to immediate or subsequent lesions. It saves all the healthy thyroid tissues as well as the parathyroids, consequently avoids thyroid or parathyroid insufficiency. It leaves in case of recurrence the possibility of intervention without exposing the patient to the dangers of myxedema. Its results are very good from the cosmetic point of view, and its rate of mortality is very low. The danger of hemorrhage that might occur has been much exaggerated, and if recurrences are more frequent than after partial thyroidectomy, they are amenable to operation without serious consequences. Intraglandular enucleation is not useful except for benign encysted tumors, liquid or solid. It is contraindicated if the tumors are exceedingly vascular, or adherent to the enveloping gland because of previous treatment or inflammation.

Northwestern Lancet, Minneapolis.

March 15.

46 Etiology, Symptoms and Pathology of Acute Infectious Diseases of the Lungs and Pleura. W. R. Bagley, Duluth, Minn.
47 *General Therapeutics of Infectious Diseases of the Lungs and Pleura. E. J. Abbott, St. Paul, Minn.
48 Surgical Treatment of Acute Infections of the Lungs and Pleura. W. H. Magle, Duluth, Minn.
49 Eclampsia. D. W. Craig, Sioux Falls, S. D.

47. **Therapeutics of Pneumonia.**—Abbott discusses the serum treatment, which is too variable in its results to arouse great faith. For relieving pain and lowering temperature he advocates ice bags placed along the axillary region; they are in every way preferable to poultices and pastes. In all diseases no suffering that can be avoided should be allowed. At the beginning it may be necessary to control the pain with a full dose of morphin, keeping it in check with the ice bag subsequently. Strychnin, while for most people an excellent tonic, both to the nervous system and the circulation, must be epiphyseal or capillary loop circulation. Murphy discusses the some individuals. The enormous doses of digitalis which are now coming into vogue may be perfectly safe in hospital patients carefully watched by trained nurses and skilled internes, but in private practice, especially in the country, they are fraught with danger. If digitalis is indicated, the use of ordinary moderate doses will be sufficient, and one should not wait until the pulse is weak and rapid and the pulmonary sounds have changed, but should give it at the first sign of weakening, watching it regularly and carefully. Nitroglycerin is useful, particularly in old people, either alone or with digitalis. It should be given freely to dilatation of the systemic vessels. Abbott has great faith in atropin. Cough mixtures and expectorants are not needed in pneumonia and they interfere with nutrition. If the cough is persistent and irritable, codein or heroin may be given, in sufficient quantity to check the irritability. The ammonium salts, carbonates and chlorids, so much in vogue are disagreeable and undesirable. Quinin also in non-malarious districts he does not see the necessity for, and its effect on the digestive organs renders it undesirable. The coal-tar antipyretics are particularly objectionable and dangerous, and are entirely unnecessary, as it is rarely in a self-limiting disease of short duration like pneumonia that the temperature need cause much alarm. In any event, ice externally is better than antipyretics internally. There is a decreasing tendency toward the use of alcohol, but in the case of a patient accustomed to use it constantly as a beverage, sickness is a bad time to stop it. There is no necessity to go to either extreme in regard to the temperature of the room.

Journal of the Kansas Medical Society, Columbus.

March.

50 Diffused Septic Peritonitis. C. E. Bowers, Wichita, Kan.
51 *Effects of Tobacco. W. L. Chilcott.
52 The Eye in Its Relation to Systemic Conditions. H. L. Scales, Hutchinson, Kan.
53 Medical Science. T. A. Stevens, Caney, Kan.
54 Treatment of Abortion. H. Randles, White City, Kan.
55 Proprietary Epsom Salts. L. A. Clary, Wyant, N. D.

51. **Tobacco.**—Chilcott discusses at length the physiologic effects of tobacco. He considers that the future indicates a reduced use instead of an increase, as school boys of from 10 to 15 years old are becoming informed as to its injurious effects. He concludes with the following counsel: While there seems to be very little harm done by mild indulgence, very few advocate any benefit derived by its use. Unless their systems are being irritated by the accumulated antinicotin bodies, it is not necessary to wean the old indulgers; only prevent its use among the young, and in a few years it will be a habit of the past.

Virginia Medical Semi-Monthly, Richmond.

March 27.

56 Materia Medica—Old and New. C. S. Webb, Bowling Green, Va.
57 The New Currents (High-Tension, Coil, or Static) in Treatment of Nervous Diseases. C. M. Hazen, Bon Air, Va.
58 Method of Removing a Retained Placenta. D. M. McIntosh, Old Fort, N. C.
59 *Use and Abuse of Drugs. J. T. Graham, Wytheville, Va.
60 "Patent Medicines"—What They Are and Why Objectionable to the Medical Profession. P. Green, Wytheville, Va.
61 *Intubation of the Larynx. J. N. Lewis, Roanoke, Va.

59. **Use and Abuse of Drugs.**—Graham, in discussing this subject, suggests that its causation may be found partly in the following fact: If we compare the prescriptions of a few years ago with those we now write for the same diseases we shall recognize two facts: first, we have followed the advice of manufacturing chemists in prescribing their special preparations periodically as they have been brought to our notice; second, we have abandoned many drugs that we once regarded as specific, and are at a loss now to know why we prescribed them. The diseases have the same symptoms and pathology and run the same course now as formerly, consequently the change must be in the remedies used, which he attributes to a lack of working knowledge of drugs in health and disease.

61. **Intubation.**—Lewis describes the operation with its indications, contraindications and complications. The irritation

from removal of the tube sometimes causes laryngeal spasm, with excessive secretion of mucus, rendering it necessary to reintroduce the tube, which is often very difficult under those circumstances. He finds that the spasms and mucous secretion can be obviated by administering a dose of atropin sulphate fifteen or twenty minutes before removal. He never uses the instrument provided with the set for removal, but finds it easier, quicker and safer to remove the tube by exerting slight pressure backward and upward below the tube on the trachea. The patient then gags, when the tube can be easily grasped with forceps or fingers.

Vermont Medical Monthly, Burlington.

March.

62 Four Cases of Pernicious Endocarditis with Autopsies. H. C. Gordinier, Troy, N. Y.
63 *Relation of Eye Strain to Epilepsy. M. B. Hodskins and G. A. Moore, Palmer, Mass.
64 Vomiting of Pregnancy. J. R. Patton, Fairfield, Vt.

63. **Eyestrain and Epilepsy.**—Hodskins and Moore have carried out at the Massachusetts Hospital for Epileptics the experiment of placing on full mydriasis a large number of patients, so as to eliminate eyestrain and keep them with paralyzed accommodation for one month, and then comparing the results as evidenced by the number of seizures with the number shown in other months. They had 88 cases, the analysis of which gives the following results: The total number of seizures in a minimum month was 545, or an average of 6.1 per patient. The total number of seizures shown in a maximum month with the same patients was 1,630, or an average of 19.6 per patient. Adding the totals, this gives 2,275 seizures, which, divided and averaged, give 13.2 per patient. The results as regards the seizures during the month of full mydriasis was 1,110, giving an average of 12.6 seizures per patient, or approximately the same as that afforded by averaging the maximum and minimum months. The authors, while they admit that eyestrain may be an excitant in an individual of sufficiently unstable nervous system, yet firmly believe the rôle played by ocular defects in the causation of epilepsy to be a very modest one.

Western Medical Review, Omaha.

March.

65 Surgeon vs. Internist. P. C. Moriarty, Omaha.
66 *Gallstone Disease; Symptoms and Treatment of Acute Attacks Preparatory to Operation. O. Grothan, Kearney, Neb.
67 Inhalation of Formaldehyd in Infective Disease of the Respiratory Tract. C. J. Alger, Leigh, Neb.
68 Type of the Insane. J. H. MacKay, Norfolk, Neb.
69 Tetanus Treated by Intramuscular Injections of Ergot Followed by Recovery. E. S. Lauzer, Rock Springs, Wyo.

66. **Gallstone Disease.**—Grothan discusses the present position of gallstone surgery, describes four cases, and suggests that instead of sending for a surgeon post haste to operate during acute attacks, or sending the patients a long distance to a hospital for operation, the physician should keep them at home, absolutely at rest, and treat them medicinally with small doses of calomel, sodium phosphate, morphin if necessary, icebag over tumor and epigastrium, and rectal feeding. Then, when the acute attack has subsided and the patient has been built up by easily digested nutritious food for a longer or shorter period, the surgeon may be called, or the patient sent to a hospital for operation, with an almost positive assurance of recovery.

Albany Medical Annals, Albany.

March.

70 State Campaign for the Prevention of Tuberculosis. S. W. Rosendale, New York, and Others.
71 The Guest; or Personal Knowledge of a Patient in a Hospital of the Insane.

FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

Lancet, London.

April 4.

1 Pygmy and Negro Races of Africa. F. C. Shrubsall.
2 *Tuberculosis of the Kidney and Malignant Disease of the Cecum. C. J. Symonds.
3 *Delayed Chloroform Poisoning; Its Nature and Prevention. W. Hunter.
4 *Bacteriology of Scarlet Fever. H. Kerr.
5 *Tuberculo-Opsonic Index of the Urine and Sweat in Health and in Tuberculosis. J. Miller.
6 Opsonins with Special Regard to Lupus Vulgaris. A. Reyn and R. Kjer-Petersen.
7 Motoring Notes. C. T. W. Hirsch.

2. **Malignant Disease of the Cecum.**—In his third Lettsomian lecture Symonds takes up malignant diseases of the cecum, pointing out the characters of early cancer thereof, the comparative safety of operation in suitable cases, and the degree of immunity from recurrence that may be secured. The two main signs are the presence of the tumor and the occurrence of early intestinal colic due to obstruction of the ileocecal orifice. Symonds describes the peculiar characters of both conditions and reports five cases, in one of which the patient was well without recurrence in 1907, ten years after the operation. He discusses the diagnosis, limits of operation, and palliative treatment, and pays particular testimony to the value of the Murphy button, though he never uses the button without supplementing it by a row of Lembert sutures all round, and, where possible, enfolding the junction by the great omentum.

3. **Delayed Chloroform Poisoning.**—Hunter discusses the pathogenesis, the disturbances connected with glycogenesis, with the metabolism of fats, and those affecting proteolytic and antitoxic functions. He concludes that the vomiting that occurs after the administration of anesthetics is not of nervous origin, but essentially toxemic, due to the profound depression of the liver function during the period of the administration. This depression will be the greater if a liver already weakened by disease or by poor nutrition be further unduly weakened by food having been withheld for many hours before the administration. This enforced abstention from food before the administration of an anesthetic may be carried too far, and, in his opinion, it is largely responsible for the fatal effects of delayed chloroform poisoning in exceptional cases. Such effects could, in all probability, be completely prevented if, instead of withholding food, particular care be taken to give the patient a very nutritious and easily digestible meal, well sweetened, two or three hours before the operation.

4. **The Bacteriology of Scarlet Fever.**—As the result of an investigation of the organisms present in the throats, etc., in 160 cases of scarlet fever at the Bury and District Joint Hospital, Kerr concludes that in the present state of our knowledge of the etiology of the disease Gordon's tests must be regarded as of little value. If the tests are of real differential worth for the various strains of streptococci—and the remarkable constancy shown by different generations of individuals to them, in his experience, indicates that they are—we find ourselves confronted by the fact that they fail absolutely to point to any particular strain as being even more frequently present in scarlet fever than in any other catarrhal and inflammatory condition of the throat. That the infecting agent is present in the pharyngeal and faucial mucous membrane is absolutely all that has been certainly established regarding the causation and source of the disease. If none of the streptococci in the throat are causative of the primary conditions, some other agent must have made it possible for them to obtain entrance to the tissues in order to produce the secondary complications. It is shown that the staphylococci are relatively increased in scarlet fever. Possibly a careful examination of these, on similar lines to that described for the streptococci, might reveal something of importance.

5. **Tuberculo-Opsonic Index of Urine and Sweat.**—Miller's observations and experiments lead him to the conclusion that urine and sweat contain antibacterial or bacteriotropic substances. He suppposes that not being required in the ordinary functions of the cells of the body they are eliminated as foreign substances.

British Medical Journal, London.

April 4.

8 Physiology of the Emotions. F. W. Mott.
9 *Vicious Circles Associated with Disorders of the Heart. J. B. Hurry.

10 Six Cases of Heart Block with Tracings and One Postmortem Examination of the Heart. E. O. Jellinek and C. M. Cooper.
11 *A Specific Treatment of Leprosy. Deycke.
12 Electrolysis in Tic Douloureux and in Spinal Sclerosis. D. Turner.
13 Toxic Effects of Petrol Fumes. C. R. Box.
14 Rigor Mortis in the Stillborn. J. Bain.

9. Vicious Circles in Heart Disease.—Hurry divides vicious circles in heart disease into five groups, as follows: 1, Circles associated with the myocardium; 2, circles associated with the endocardium; 3, circles associated with the pericardium; 4, circles associated with neuroses; and 5, circles associated with a fall in blood pressure. He discusses each group in detail and gives a diagrammatic representation showing the analysis of the vicious circles into component factors. As regards treatment, most of the recognized principles of cardiac therapeutics apply, but he adds, with illustrations, the following special points: 1. The exciting cause must be sought. 2. It is frequently desirable to treat actively each of the several factors concerned. 3. When there is a choice of treatment, each practitioner must attack what appears to him the *locus minoris resistentiæ*. Hence results a varying *modus operandi* for the same disorder, a variety which puzzles the patient, especially if several physicians are consulted in succession. 4. The close dependence of the heart on the central nervous system is shown by the existence of several vicious circles in nervous introspective patients. 5. Many vicious circles associated with the myocardium arise from the failure of compensatory changes, as, for instance, when a salutary hypertrophy is followed by undue dilatation, caused either by degeneration of the myocardium or by the excessive work thrown on the heart. Here treatment may do much to increase the vigor of the myocardium or to lighten its load.

11. Specific Treatment of Leprosy.—Deycke reports the result of his researches with reference to attempts to grow the lepra bacillus in pure culture. He was unable to grow the bacillus in the form in which it appeared in leprous tissue, but he isolated a characteristic micro-organism of specific characters, which he terms *Streptothrix leproides*. From this organism he has extracted with ether a genuine neutral fat which he calls "nastin." The injection of this substance in lepers gives rise to a reaction comparable to the tuberculin reaction in tuberculous patients. Deycke found that by combining nastin with benzoyl chlorid the nastin was activated to an unexpected extent. Benzoyl-nastin solution appears to act on the lepra bacilli, the nastin enabling the benzoyl to deprive the lepra bacilli of fat and this destroys them. He is convinced that in leprosy benzoyl-nastin therapy is harmless and may be conscientiously recommended as a real advance in the treatment of that disease.

Medical Press and Circular, London.

April 1.

15 Two Cases of Subacute Infective Epiphysitis. E. M. Corner.
16 Maladies of the Heart. Sir J. Sawyer.
17 *Open Windows and Adenoids. J. S. Wallace.
18 Seaside Treatment for Sick Children. G. Carpenter.

17. Open Windows and Adenoids.—Wallace discusses the evolution of man's habits from his primitive condition to his present one, in the temperate and colder zones, to explain his view that adenoids in children are largely connected with open window sleeping. It is not the fresh air, however, but the cold and damp that accompany it, a combination not found in the tropics, that is to blame. It is not right to attempt to ventilate a room by simply keeping the windows open if the weather is cold and damp. The increase in adenoids, he says, seems to have been concomitant with the cult of open windows night and day, summer and winter. He finds adenoids much more common among children of the educated classes who are instructed to keep their windows open at night throughout the year. His investigations show that children brought up with open windows are fifteen times more liable to contract adenoids than those who sleep with closed windows on cold and damp nights, or throughout the greater part of the year. For instance, out of 69 children sleeping with closed windows, 2 cases of adenoids were found; while out of 49 sleeping with open windows at night winter and summer, 22 cases of adenoids were found. Wallace supports his opinion by the known effect of cold and damp on the nasal and nasopharyngeal mucous membrane. Further, the tendency to adenoids in a family he considers attributable, not to hereditary predisposition, but rather to similarity of mal-environment.

Intercolonial Medical Journal of Australasia, Melbourne.

February.

19 Medical Treatment of Exophthalmic Goiter. K. Hiller.
20 Pathology of Thyroid and Parathyroid Glands. B. Kilvington.
21 *New Generalization in Serum Therapy. D. M. Paton.
22 Three Unusual Obstetric Cases. G. R. Adam.
23 Juvenile General Paralysis. F. H. Cole and H. D. Stephens.
24 Alveolar Sarcoma in Undescended Testicle. G. A. Syme.

21. Serum Therapy.—Paton offers an amendment to the accepted theory of immunity, as propounded by Ehrlich, which theory, he says, "takes no notice of the elements in the serum which have caused the reaction in the cell which produced the excess of cell receptors, nor of whether they can also be transferred to the patient to produce the same cell relation in him as in the animal producing them. These elements are in all serums, and yet they are unaccounted for." He considers that Ehrlich's theory, while true in part, can not account for the whole resistance to microbic invasion. He concludes that resistance to infection in man and animals consists of the following elements, and that these elements are in their serums: 1. Antitoxins and bacteriolysins of lymphatic origin, chemical in nature, and capable of acting *in vitro*—present only in response to the stimulus of infection. 2. Tissue antitoxins or opsonins, consisting of excess receptors—present normally in physiologic quantity, and increased by pathologic stimuli. With the cell reaction necessary for their production, they form the "tissue resistance." 3. Hormones—for all tissues—present at all times, but increased by pathologic stimuli. They act only in contact with the tissue cells and not *in vitro*. He considers the way in which each of these fares on hypodermic injection of the serum, and concludes that: 1. Lymphatic antitoxins are absorbed when injected hypodermically and act as though produced by the patient. They are not absorbed when given by mouth. 2. Tissue antitoxins, opsonins or surplus tissue receptors are not capable of being transferred to the patient by any known method without destroying their specific character. 3. Hormones are changed to anti-hormones on hypodermic injection as soon as they reach the lymphatics. In the lymph spaces they act locally in contact with the tissue cells. Given by rectum or by mouth, they act on all tissues physiologically in normal serum, and with increased power on tissues which have been pathologically affected in the animal from which the serum has been drawn. The recognition of the double lines of defense, instead of one of general resistance, and the consequent dual character of the resulting serum, with the necessity for each antibody to be passed directly into the system in which it originated, throws a flood of light on the whole problem.

Clinical Journal, London.

April 1.

25 Strangulated Hernia. A. A. Bowlby.
26 Pancreatic Reaction in the Urine and the Diagnosis of Pancreatic Disease. P. J. Cammidge.
27 Chronic Intestinal Obstruction. H. L. Barnard.

Glasgow Medical Journal.

April.

28 The Schola Salernitana: Its History and the Date of Its Introduction into the British Isles. N. Moore.
29 Lachrymation: Its Causes and Treatment. F. Fergus.
30 Case of Purulent Otitis Media with Involvement of the Sigmoid Sinus; Operation; Ligation of Internal Jugular Vein; Septic Abscess of the Lung; Recovery. J. G. Connal.
31 Serum Disease in Man After Single and Repeated Doses. J. R. Currie.

Presse Médicale, Paris.

March 28, XVI, No. 26, pp. 201-208.

32 *Vacuum Aspiration from Hydrant Water Power. (Aspiration par la trompe à eau.) F. Legueu.
33 *Obesity, Simple and Complicated. M. Labbé.

32. Vacuum Aspiration from Hydrant Water Power.—A cylinder cap screws over the mouth of the faucet and a flexible but non-compressible rubber tube connects the cap with a stoppered jar. A second tube passes through the stopper of

the jar and terminates at its outer end in a trocar or cannula which is inserted in the cavity to be drained. After the water has been running from the faucet for a few minutes, the suction from the vacuum thus induced is strong and constant, and Legueu has found this simple apparatus a great improvement over all other devices for aspirating fluids in the clinic. The degree of suction can be regulated by turning the faucet, while the aspiration proceeds with such steady force that no fluid escapes around the outside of the cannula. In purulent pleurisy, for example, a very small incision is made in the pleura through which the bent cannula is introduced. The contents of the pleural cavity are rapidly sucked up by the aspirator. The pleura can thus be completely emptied before it is opened further, and not a drop of pus soils the patient or the field of operation. In suppuration in the kidney he makes the incision in the organ exposed in the lumbar wound and places the tip of a large trocar close to the incision. The pus is sucked up at once into the trocar or the latter can be introduced into the incision and thus soiling of the wound is avoided. An ordinary Potain aspirator is unable to dislodge the thick pus of a pyosalpinx, but the faucet aspirator evacuates it. He says that when a gall bladder is incised, if the tip of the trocar is held at a distance of 1 cm. from the wall of the viscus a small black stream of bile is drawn up into the tube without a drop escaping from this straight stream. In evacuating diffuse peritonitis the effusion can be aspirated from the remotest nooks by this means. In operations on the bladder the apparatus is frequently useful to aspirate the blood and urine accumulating in the bladder, which is thus kept clean. This is also an advantage in operating on the mouth or throat. He has a set of cannulas and trocars of different sizes, with the opening only at the tip, to use with this water power aspiration.

33. **Simple and Complicated Obesity.**—Labbé designates as simple obesity that form in which the obesity is due merely to accumulation of fat, while in the complicated form there is accumulation of both fat and water. Simple or florid obesity requires merely reduction of the food to a point below that actually required by the organism, supplementing this restriction of the diet with vigorous exercise, bicycling, walking, fencing or horseback riding. This treatment should be energetic; it is best carried out at some mountain resort, and it requires great patience and perseverance. Restriction of fluids does no good. After the patient has lost from six to ten pounds there is not much hope of a further reduction. In the complicated form of obesity, on the other hand, with a tendency to heart and kidney troubles and edema, treatment should be based on deprivation of salt or restriction to a milk diet, as in treatment of pronounced chronic nephritis. The amount of food allowed should also be well below the actual needs of the organism. Repose is the main thing, to avoid accidents on the part of the heart. Any exercise taken should be moderate, and under the physician's supervision. The effects obtained in these cases are frequently surprising, the patient losing nearly 85 pounds or 116 pounds, as in two cases he cites, and losing two pounds a week. The necessity for differentiation of the simple and complicated types of obesity is shown by the varying indications for treatment and the results when proper indications are heeded.

Semaine Médicale, Paris.

April 1, XXVIII, No. 14, pp. 157-168.

34 *Diagnosis of Insufficiency of the Pancreas. R. Lépine.

34. **Diagnosis of Pancreatic Insufficiency.**—Lépine concludes from his exhaustive study of the literature on this subject, in addition to his own experience, that the best signs of disturbance in the external secretion of the pancreas are an abundance of fat and scarcity of saponified matters in the stool, the A. Schmidt method of determining the energy of the trypsin by the digestion of the nuclei of muscle fiber, and the reduction of the urinary sulphates. The mydriasis induced by adrenalin seems to be a sign of lack of the internal secretion of the pancreas. Löwi announced last year that instillation of a 1 per thousand solution of adrenalin in the eye did not cause mydriasis in animals except in those in which the pancreas had been removed. Examination of 48 patients, including 18 diabetics, showed positive findings from instillation of the adrenalin in 55 per cent. of the diabetics and only in 2 of the 30 non-diabetic patients, and one of these had cancer of the liver and the other had exophthalmic goiter. Further research on this adrenalin test of pancreatic insufficiency promises interesting results. Lépine's own research has shown that maltosuria is frequent in diabetics and is the rule in dogs after pancreatectomy. The maltosuria is evidently the consequence of defective functioning of the liver, and it is probable that this functional defect is dependent on pancreatic insufficiency, but still it may result merely from some primary liver disturbance. In conclusion, he remarks that it may be possible to obtain further information in regard to pancreatic insufficiency by stimulating the gland by the aid of some of the new methods of research. In the dog, the starch-digesting power of the feces depends almost exclusively on the pancreatic juice, but the saliva in the dog is of comparatively little importance, compared to man. Volhard's test is based on the fact that the duodenal fluid flows back into the stomach when a large amount of oil or very acid liquid is ingested. He introduces into the fasting stomach about 200 c.c. of olive oil. Fifteen minutes later he aspirates about 100 c.c. of stomach content and, after pouring off the supernatant oil, examines the fluid for trypsin by digestion of casein in an alkaline medium. He found trypsin in the stomach nine times out of ten in healthy individuals.

Beiträge zur klinischen Chirurgie, Tübingen.

February, LVII, No. 1, pp. 1-229.

35 Autoplastics of the Urethra. (Autoplastik der Harnröhre.) E. Goldmann.
36 Theories of Various Mechanisms of Luxation of the Semilunar Bone. (Lunatumluxation.) G. Montandon.
37 New Instrument for Extraction of Swallowed Teeth Plates. (Instrument zur oesophagoskopischen Extraktion verschluckter Gebisse.) M. Makkas (Bonn).
38 Surgical Treatment of Peptic Ulcer in Stomach and Duodenum and Its Complications and the Ultimate Results. (Chirurgische Behandlung peptischen Magen- und Duodenalgeschwürs und seiner Komplikationen und die damit erreichten Endresultate.) K. Borszeky.
39 Two Cases of Resection of Breast Wall and Plastic Restoration Over Exposed Lung. (Brustwandresektion mit Plastik auf die freigelegte Lunge.) A. Hoffmann.
40 Solid and Cystic Adamantinoma of Lower Jaw. K. Fritsch.
41 Congenital Defect in Abdominal Muscles and Incarcerated Ventral Hernia. (Kongenitale Bauchmuskeldefekte und Hernia ventralis incarcerata.) R. Levy.
42 Occlusion from Kinking plus Torsion of Intestine on Longitudinal Axis. (Wringverschluss des Darmes.) A. Peiser.
43 Plastic Operation on Nose by Flap of Skin, Periosteum and Bone Taken from Clavicle-Shoulder Region. (Rhinoplastik mittels direkter Einpflanzung eines Hautperiostknochenlappens aus der Schlüsselbein-Schultergegend.) Mandry.

Deutsche medizinische Wochenschrift, Berlin.

March 26, XXXIV, No. 13, pp. 537-576.

44 *Stone Formation in Kidneys and Ureters. (Steinkrankheit der Nieren und der Harnleiter.) H. Kümmell.
45 Case of Hysteric Hemiplegia in Man of 65. E. Schultze.
46 *Mixed Infection in Typhoid. (Mischinfektion bei Typhus abdominalis.) F. Port.
47 *Spontaneous Fractures in Children. (Spontanfrakturen im Kindesalter.) G. Hunaeus.
48 Canthoplasty. (Lidspaltenerweiterung.) Pick.
49 Instantaneous Roentgen Pictures. (Schnellaufnahmen mit Röntgenstrahlen.) M. Levy-Dorn.

44. **Kidney and Ureter Stones.**—Kümmell has frequently found a course of mineral water successful in the treatment of primary aseptic kidney stones with only slight disturbances and hemorrhage. Under other conditions, he advises operative treatment, remarking that there is scarcely any affection of the kidneys that has profited to such an extent by modern diagnostic measures as kidney lithiasis while the results of early operative treatment are more brilliant than in almost any other field of surgery.

46. **Mixed Infection in Typhoid.**—Port reports that in 2 of his 33 typhoid patients last year the *Staphylococcus pyogenes aureus* was found in the blood during life, in another the pneumonia diplococcus, and in a fourth the colon bacillus, with the typhoid bacilli. Study of these 4 cases and 38 others of mixed infection in the literature shows, he thinks, that secondary general infection in typhoid is more frequent than hitherto recognized, and that it is responsible for part of the clinical picture, especially in the fulminating cases. Severe brain symptoms, extremely high temperature, jaundice, hemor-

rhages, chills, high leucocyte count and endocarditis should suggest the possibility of mixed infection. He does not think that the secondary infection occurs by way of the intestinal ulcerations as a rule. Persons with an old endocarditic or similar process are liable to have it flare up under the typhoid infection and entail mixed infection. In his 4 cases the great incongruity between the severity of the clinical picture and the slight extent of the ulceration in the intestines was striking. In bacteriologic examination of the blood he warns that the bile technic destroys germs other than the typhoid, and consequently agar-blood plates (Schottmüller) or the Castellani technic should be preferred. All the cases of mixed general infection known to date terminated fatally.

47. **Spontaneous Fractures in Children.**—Hunaeus reports a case in which a compound fracture of the elbow became infected with staphylococci with the development ten days later of metastatic foci at other points in the marrow of the long bones. Even slight movements of the child—as in sleep—were then able to induce spontaneous fracture at these points, in the left ulna, in both legs and in the metacarpal bones. All the fractures healed in the course of three months.

Medizinische Klinik, Berlin.

March 29, IV, No. 13, pp. 433-476.

50 *External Examination of Upper Air Passages. (Aeussere Untersuchung der oberen Luftwege.) Dorendorf.
51 *Relations Between Multiple Exostoses and the Thyroid. (Beziehungen zwischen Exostosen und Schilddrüse.) C. Ritter.
52 Diagnosis of Persistence of Duct of Botallo. Two Cases. (Diagnose der Persistenz des Ductus arteriosus Botalli.) T. Hondo.
53 Hydriatic Treatment of Rheumatic Affections. A. Fuerstenberg.
54 General "Centrifugal" Electrization. A. Erfurth.
55 *Disturbances in Vision After Loss of Blood. (Sehstörungen nach Blutverlust.) Proell.
56 *Postoperative Parotitis. H. Hellendall.
57 Dangers of "Record Breaking" in Sports. (Sport und Herz.) A. Selig.

50. **Examination of Upper Air Passages from Without.**—Dorendorf reviews the information to be obtained from external examination of the upper air passages, mentioning among other things that suppuration in one side of the nose, in a child under 7, that persists longer than two weeks can be almost positively ascribed to a foreign body. He calls attention further to the insidious onset of lupus of the nasal mucosa which may for a long time present the aspect of ordinary rhinitis with eczema of the outer part. Stridor occurring predominantly during inspiration points to stenosis of the larynx; when it occurs predominantly during expiration it points to stenosis of the trachea. His experience has confirmed the old saying that general dilatation of an artery scarcely ever entails signs of compression on the part of adjacent organs while this is an almost constant occurrence with aneurism.

51. **Relations Between Multiple Exostoses and the Thyroid.**—Ritter describes a family, in which there were seven children, the members of which all presented numerous exostoses except the mother and one daughter. This daughter is now 13 and differs in growth and complexion entirely from the other children, and she exhibits a typical case of exophthalmic goiter. The thyroid in the other members of the family can not be palpated and none has ever shown any tendency to the symptoms of exophthalmic goiter. He thinks that the various features of these cases confirm the assumption in regard to the connection between the thyroid and bone development.

55. **Visual Disturbances After Loss of Blood.**—Proell comments on the 198 cases in the literature in which optic neuritis terminating in atrophy followed excessive loss of blood, and reports a case personally observed. Choked papilla entailing almost total blindness came on a few days after excessive menstrual hemorrhage in a girl of 16, previously apparently healthy, the third time that the menses had occurred. No cause for the excessive hemorrhage could be determined; it was arrested only by tamponing the vagina on the sixth day. Vision improved later in one eye so that the patient can now count fingers at six feet, but the other eye is totally blind. Proell thinks that there must be always some blood affection or nutritional disorder at the basis of these severe visual disturbances after loss of blood, remarking that he knows of no instance of the kind in healthy soldiers after hemorrhages. In only 12.4 per cent. of the total number on record was the amaurosis unilateral, but the degree of disturbance frequently varied in the two eyes, the right being more severely affected in 85.7 per cent. In a few instances the amaurosis came on suddenly and was complete in both eyes—in these cases the patients generally woke in the night with severe headache and found themselves blind, as in the case reported. There is one case on record of sudden total deafness from the same cause. Treatment can be only by dietetic and tonic measures to restore strength and to supply the missing juices to the organism. Injections of strychnin and galvanization are perhaps indicated to maintain the excitability of the optic nerve. On account of the bad prognosis disturbances in vision following great loss of blood are to be feared as much as blindness after the use of quinin, wood alcohol or other poison.

56. **Postoperative Parotitis.**—Hellendall's patient was a woman who had been operated on for a right pyosalpinx following an abortion. On the fifth day parotitis on the left side developed with fever for ten days and irruption of pus into the left ear and its escape outward, after which the process healed with complete restitution. The *Staphylococcus pyogenes aureus* was found in the pus. Postoperative parotitis generally is a severer process than ordinary mumps. Uncomplicated postoperative parotitis has a mortality of 30 per cent., according to Wagner. It is important to poultice and incise early in these cases. Whether to make a practice of disinfecting the mouth after an operation depends on whether one believes that the parotid gland becomes infected through the duct of Steno or by way of the blood. As cases are known in which mumps develops first in the testicles and not until later in the parotid gland, he thinks that this excludes infection by way of the duct of Steno. Another argument against it is the long interval that sometimes elapses between the operation and the development of the postoperative parotitis. In conclusion, he urges further study of the influence exerted on the parotid gland by the genital organs.

Münchener medizinische Wochenschrift.

March 24, LV, No. 12, pp. 601-656.

58 *Natural Immunity of Living Tissue. (Eine Theorie der natürlichen Immunität des lebenden Gewebes.) F. Holzinger.
59 *Serum Diagnosis of Syphilis. (Wassermannsche Serodiagnostik der Syphilis.) E. Fraenkel and H. Much.
60 The Present Tendencies in Operative Obstetrics. (Gegenwärtige Wandlungen in der operativen Geburtshilfe.) K. Baisch.
61 *Localization and Symptoms of Intracranial Extravasation of Blood in the Newly-Born. (Intrakranielle Blutergüsse Neugeborener.) L. Seitz.
62 *Connection Between Stomach and Nasal Affections. (Zusammenhang von Magen- und Nasenleiden.) A. Hecht.
63 Hyperemic Treatment of Acute Inflammatory Affections. (Stauungshyperämie bei akut entzündlichen Krankheiten.) Coste.
64 *Unusual Forms of Puerperal Hemorrhage and Their Treatment. (Intrauterine Blutung bei Blasenmole; Blutung bei abnormer Gerinnselbildung nach Ausstossung der Plazenta; Blutung nach Durchreissung von Vasa prævia.) H. Sellheim.
65 Varying Temperature of Two Sides in Appendicitis. (Halbseitentemperaturen bei Appendicitis.) C. Widmer.
66 *Psychoses in Diabetics. (Diabetes und Psychose.) M. Kauffmann.
67 Genesis of Gallstones. (Genese der Gallensteine.) L. Lichtwitz.
68 Life-saving Effect of Infusion of Adrenalin in Salt Solution in a Case of Peritoneal Sepsis. O. Rothschild.
69 Catgut Tetanus. (Die postoperativen Tetanusfälle von Zacharias.) F. Kuhn.

58. **Explanation of Natural Immunity of Living Tissue.**—Holzinger's experiments were mainly with porous jars set in water and control glass jars, all filled with a sugar culture medium sown with yeast fungi. It was found that when osmosis proceeded naturally through the porous jars the growth of the micro-organisms was inhibited or completely suspended, while the control, non-porous jars presented a luxuriant growth. These findings suggest that normal osmotic processes in the living cells constitute a sort of natural immunity, germs not finding such cells conducive for their growth. When for any reason the osmotic processes are checked, then the germs can proliferate unhindered. The osmotic processes in living tissue can be checked temporarily by traumatism, by obstruction of the emunctories or various outlets; by dryness of the

tissues and by great reduction in the temperature of the parts as chilling has a retarding effect on osmotic processes. Daily experience shows that these conditions do in fact lower the resisting powers at such points, and expose them to invasion of germs.

59. **Serum Diagnosis of Syphilis.**—Fraenkel and Much have been applying the Wassermann technic of serum diagnosis at autopsies, and have found that it is specific and reliable. In many cases when there was nothing during life to indicate syphilis, and yet the test gave positive findings, syphilitic processes could always be discovered somewhere at autopsy. They urge the wider application of serum diagnosis at autopsy to explain or confirm the findings during life.

61. **Diagnosis, Treatment and Prognosis of Intracranial Hemorrhage in New-Born Infants.**—Seitz's previous communication on this subject was reviewed in THE JOURNAL, Sept. 28, 1907, page 1151. His experience now includes 23 cases of intracranial extravasation of blood, fatal in all but 5 instances. He emphasizes the clinical importance of the location of the extravasation, above or below the tentorium; the hemorrhage proved fatal in all his cases in which it was located below. He states that the childbirth had been spontaneous and easy in more than one-fourth of the number, so that intracranial hemorrhage is not necessarily due to foreign intervention, but may occur during normal delivery, especially hemorrhage over one hemisphere of the cerebrum. He also mentions that scopolamin had been given to the mother in one of the cases. The constant screaming of the child, commencing about the second day, is an unfailing sign of hemorrhage causing painful distention of the dura. He reiterates the importance of keeping the infant in an incubator to avoid irritation from without.

62. **Connection Between Stomach and Nasal Affections.**—Hecht refers to old chronic affections of the nose or accessory cavities, the pus from which is swallowed and causes a train of stomach symptoms. The nasal process may be ignored or it may manifest itself only in trigeminal neuralgia, pain in the orbit, oculomotor paralysis, etc. In one case, the stomach disturbances from bilateral suppuration in the maxillary antrum were so severe that cancer was suspected and the patient succumbed before long. Kishi has recently reported 15 cases of otitic dyspepsia in infants. The connection between the nasal affection and the stomach troubles in all these cases was confirmed in most of them by the subsidence of the latter as the nasal affection was cured by appropriate measures.

64. **Unusual Forms of Puerperal Hemorrhage.**—Sellheim expatiates on the importance of teaching students on the phantom how to manage puerperal hemorrhage, including the more unusual forms, of which he describes three examples.

66. **Diabetes and Psychoses.**—In the case reported, the mental derangement subsided as soon as strict antidiabetic diet was enforced.

Therapeutische Monatshefte, Berlin.

February, XXII, No. 2, pp. 57-110.

70 Treatment of Psychic Agitation. (Behandlung der psychischen Erregungszustände.) L. W. Weber.
71 Treatment of Trachoma. Pick.
72 *Modern Operations for Improving the Shape of the Nose without a Scar. (Narbenlose Verbesserung der Nasenform.) F. Koch.
73 *Etiology of Uratic Diathesis. Scherk.
74 Treatment of Sleeping Sickness to Date. (Zur Frage der Therapie der Schlafkrankheit.) H. Naegeli-Akerblom and P. Vernier.
75 Discussion of Causal Agent of Syphilis. (Die Spirochaete pallida und der Cytorrhyktes luis.) Jancke. Id. C. T. Noeggerath.

March, No. 3, pp. 111-164.

76 Surgical Treatment of Hemorrhoids. E. Braatz.
77 *Chronic Albuminuria in Children. L. Langstein.
78 Physiologic and Therapeutic Importance of Exercises for Nutritional and Circulatory Affections. (Bedeutung der heilgymnastischen Bewegung für die Krankheiten der Ernährung und des Kreislaufes.) Hasebroek.
79 Experimental Research with Intra-arterial and Intravenous Injections. (Intraarterielle und intravenöse Injektionen im Tierexperiment.) A. Mayor.

72. **Improving Shape of Nose Without a Scar.**—Koch gives a number of illustrations showing the cosmetic results obtained with his special fraise applied through the nostril to cut away protuberances in the bone or remedy other conditions which deform the nose. He also illustrates one out of a number of cases in which a saddle-nose was raised to normal shape and size by implantation of a support made of hard paraffin. He takes a plaster cast of the nose, then makes a plaster mold from this cast, and pours melted paraffin on the mold until the desired shape is obtained. The paraffin thus modeled on the cast of the nose is taken off and introduced through the nostril into the desired place under the skin of the nose. He always makes a point of having several of these paraffin supports ready, so that if one breaks while it is being introduced, another is at hand to take its place. This technic is practicable not only for the most extensive defects, saddle-nose, etc., he says, but also for small disfigurements of various kinds.

73. **Etiology of Uratic Diathesis.**—Scherk thinks that evidence is accumulating to sustain the assumption that gout is the result of some disturbance in the action of the ferments engaged in the metabolism of nuclein. Most writers agree that ingestion of nuclein in the food should be reduced to the minimum, and that treatment should aim to promote the oxidation of uric acid. The latter can be accomplished by increasing the amount of oxidases, and this is promoted by exercise in the open air and courses of mineral waters.

77. **Chronic Albuminuria in Children.**—Langstein urges the necessity for treating children with orthostatic albuminuria as if they were healthy, that is, allowing them out-of-door freedom and not restricting their diet, merely protecting them against getting chilled and against exhaustion. Moderate exercise and gymnastics are useful and also an ordinary mixed diet. Drugs should be avoided, and even a change to a hot dry climate is not particularly beneficial. The same rules apply also to chronic nephritis, but it is important to differentiate orthostatic from nephritic albuminuria on account of the prognosis. With the former it is eminently favorable, while the outcome of chronic nephritis in a child is extremely doubtful. His experience with 100 cases has shown that supervision of the child for a year will differentiate orthostatic albuminuria if the night urine is always free from albumin, and if the proportion of albumin in the day urine varies at different times. The absolute proportion of albumin does not decide whether the trouble is of the orthostatic variety or not; precipitation, cold, by acetic acid speaks in its favor, as also a large proportion of oxalic acid. In merely orthostatic albuminuria, he never found the blood pressure increased or any changes in the fundus of the eye. The heart may show signs of vasomotor irritability, but never the hypertrophy and accentuation of the second aortic sound characteristic of chronic nephritis. Signs of latent tuberculosis are not infrequently discovered in children with osthostatic albuminuria. In dubious cases von Noorden gives the child 10 gm. (150 grains) of urea on two consecutive days. Under normal conditions elimination of the urea nitrogen proceeds very rapidly.

Therapie der Gegenwart, Berlin.

March, XLIX, No. 3, pp. 97-144.

80 Treatment of Biliary Lithiasis. (Gallensteinkrankheit.) R. von Renvers.
81 Medicinal Treatment of Fever. (Medikamentöse Therapie fiebernder Kranker.) E. Aronsohn.
82 Physical Measures in Treatment of Asthma. H. Naumann.
83 Dangers of Irrationally Applied Electric Incandescent Light Baths. (Gefahren des irrationell angewandten elektrischen Glühlichtbades.) H. Davidsohn.
84 *Accidental Inoculation of Tendon Sheaths in Hospital Attendants with Tuberculosis. (Impftuberkulose der Sehnenscheiden beim Pflegepersonal.) R. Mühsam.
85 Can a Physician Be Sued for Neglect to Make a Roentgen Examination? (Kann der Arzt für Unterlassung einer Röntgenuntersuchung verantwortlich gemacht werden?) F. Karewski.
86 *Consequences of Pessary Treatment. (Folgen der Pessartherapie.) Walther.
87 *Radium Treatment of Nevus. F. Nagelschmidt.

84. **Tuberculous Inoculation of Tendon Sheaths in Hospital Attendants.**—Mühsam reports three cases of hospital attendants who cut or scratched their hands while washing patients' spit cups or handling a Pravaz syringe. The tendon sheath became inflamed in each after the small wound had apparently healed. The inflammation came on slowly with scarcely any pain, but spindle-shaped enlargement and considerable impairment of function followed. One patient systematically exposed his hand to direct sunlight, with unmistakable benefit, but operative treatment was required in two cases and may yet be

necessary in the third. Mühsam summarizes a few similar cases from the literature, all demonstrating the advantages of operative measures.

86. **The Evils of Pessaries.**—Walther describes a dozen cases in which pessaries had been worn without change for years, the findings later emphasizing the correctness of his plea that a woman fitted with a pessary must be instructed as to its dangers and impressed with the necessity of returning to have the pessary taken out and cleaned and the condition of the mucosa inspected every two or three months. He urges that women should be advised to submit to an operation rather than resort to a pessary. Soft rubber and very large pessaries should be abolished forever, he says. A small, hard rubber ring or "peg" pessary, properly selected for the individual case, may do good service in certain cases. One of his patients had worn the pessary for 20 and another for 30 years. Cancer of the rectum developed in one case in the septum between rectum and vagina.

87. **Radium Treatment of Nevus.**—Nagelschmidt confirms the remarkable efficacy of radium treatment of nevus, far surpassing in effect and convenience for the patient, he says, any other measure known to date. With pure, 100 per cent. radium bromid simple, flat, capillary nevus is exposed for 5 or 6 minutes; cyanotic nevus requires 10 minutes, and protuberant nevus from 15 to 20 minutes. After about 9 days a brownish pigmentation is noticed, with slight exudation and scab formation, followed by local infiltration and superficial desquamation for several weeks. About the fifth week the nevus gradually assumes the characteristics of normal skin or the site remains more like a white cicatrix, the effect proportional to the length of the exposure. By thus treating one point after another, a large flat nevus can be entirely obliterated, the exposed area requiring only from 6 to 10 weeks for complete blanching.

Wiener klinische Wochenschrift.

March 26, XXI, No. 13, pp. 415-452.

88 Anaphylaxis. R. Doerr.
89 Deviation of Complement and Precipitation of Lecithin. (Komplementablenkung und Lezithinausflockung.) M. von Eisler.
90 Multiple Paralysis in Adult Resulting from Intrauterine Constriction of Upper Arm. (Multiple Nervenlähmung infolge intrauteriner Umschnürung.) G. Stiefler.
91 *Gonococcus Infection in the Male. (Klinische Studien über den Gonokokkus.) R. Picker.
92 Color Tests in Railroad and Marine Service. (Farbensinnprüfung im Eisenbahn- und Marinedienste.) J. Rosmanit.

91. **Treatment of Gonorrhea.**—Picker bases his treatment on the finding of gonococci in the rinsing fluid and in the expressed secretions of the lower urinary passages, prostate and seminal vesicles. The microscope and a Janet syringe reveal the foci of retention and rational treatment consists in the systematic evacuation of all these foci, working from above downward, emptying the kidney pelvis, massaging the ampulla of the vas deferens, the seminal vessels, prostate, etc., using a mild antiseptic only when there is profuse secretion. He refrains on principle from instillations, as they interfere with microscopic control.

Zentralblatt für Chirurgie, Leipsic.

March 28, XXXV, No. 13, pp. 393-424.

93 Radical Operation for Femoral and Inguinal Hernia on Same Side by Single Procedure. (Radikaloperation von Schenkel- und Leistenbruch derselben Seite in einem Akt.) F. Berndt.
94 Handy Scissors. (Eine neue Schere.) V. E. Mertens.

Policlinico, Rome.

March 22, XV, Practical Section, No. 12, pp. 357-388.

95 *Diagnostic Significance of Enlargement of Spleen in Typhoid Fever. (Tumore di milza nella febbre tifoide.) T. Silvestri.

March, Surgical Section, No. 3, pp. 97-144.

96 *Hernia of the Ureter. (Ernia dell' uretere.) L. Galassi.
97 *Relations Between the Testicle and Other Glands with Internal Secretion. (Rapporti tra la glandola interstiziale del testicolo e le glandole a secrezione interna.) V. Barnabo.

95. **Enlargement of the Spleen in Typhoid Fever.**—Silvestri states that in 147 cases of typhoid fever, about half of the patients being under 20, the spleen was found enlarged in 130 patients, and only one of these died—a young child who succumbed to pulmonary complications. In the other 17 patients it was impossible to palpate the spleen, and all but one of these patients died, between the fifteenth and thirty-fifth day of the disease. In every case the complications, duration of the disease and relapses were in inverse proportion to the size of the spleen. He is convinced that this organ plays a predominant and even a decisive rôle in the defense of the organism against typhoid infection, among its other functions clearing away the dead leucocytes and leaving the field free for new hosts of phagocytes. The spleen and the lymph glands connected with the intestines all hypertrophy from excessive functioning.

96. **Hernia of the Ureter.**—Galassi summarizes fifteen cases on record in which the ureter formed part of an inguinal hernia; nine of the case reports were published in Italy. He then gives the details of a case personally observed. In none of the cases was the participation of the ureter in the hernia diagnosed before operation. The pains were always vague, but micturition was difficult in some cases and one of the patients had suffered much distress, with swelling of the scrotum and retention of urine, when a truss was used. In one case the loop of ureter had dropped into the scrotum, and the kinking of the ureter had entailed hydronephrosis on that side. His patient was a girl of 17 who had had a femoral hernia for some years, slightly painful, but with no symptoms referable to the urinary organs. The ureter was recognized in the sac when it was opened, and no disturbances followed its reduction. He mentions in conclusion that the ureter has a circulation of its own and consequently can be resected without fear of necrosis.

97. **Relations Between Testicle and Other Glands with Internal Secretion.**—Barnabo reports a series of experiments on guinea-pigs and other laboratory animals to study the effect on other organs of bilateral resection of the vas deferens, bilateral castration and similar operations. The hypophysis became hypertrophied in the castrated animals and also after resection of the vas. The suprarenal capsules, thyroid and parathyroid glands also showed unmistakable signs of increased secretory functioning to supplement the lacking or deficient functioning of the testicles. These glands apparently did not alter their structure, except that the thyroid showed a transient change in structure in the castrated animals. No modification of any kind was observed in the spleen in any instance.

Books Received

Acknowledgment of all books received will be made in this column and this will be deemed by us a full equivalent to those sending them. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

THE INFLUENCE OF ALCOHOL AND OTHER DRUGS ON FATIGUE. By W. H. R. Rivers, M.D., F.R.C.P., Fellow of St. John's College, Cambridge. Pp. 136. Cloth. Price, $1.70. London: Edward Arnold, 1908. New York: Longmans, Green & Co., 1908.

THE ANATOMY OF THE AUTOMOBILE. By (Dr.) A. L. Dyke. Member of S. A. E. First Revised Edition. Pp. 727, with Illustrations. Cloth. Price, $2.00. St. Louis: Published by A. L. Dyke, 3932 Olive Street.

AMERICAN PRACTICE OF SURGERY. Edited by Joseph D. Bryant, M.D., LL.D., and Albert H. Buck, M.D. Vol. 4. Pp. 1010, with Illustrations. Cloth. Price, $7.00. New York: William Wood & Co., 1908.

THE THERMAL DEATH POINTS OF PATHOGENIC MICRO-ORGANISMS IN MILK. By M. J. Rosenau, Director Hygienic Laboratory. Paper. Pp. 85. Washington: Government Printing Office, 1908.

REPORT OF THE NEW YORK STATE COMMISSION TO INVESTIGATE THE CONDITION OF THE BLIND. Cloth. Pp. 586, with Illustrations. Albany: J. B. Lyon Co., State Printers, 1907.

STATE BOARD OF HEALTH, OF NEW JERSEY, THIRTY-FIRST ANNUAL REPORT, 1907. Cloth. Pp. 432. Trenton, N. J.: The John L. Murphy Publishing Co., 1908.

ANNUAL REPORT OF THE HEALTH DEPARTMENT OF THE CITY OF RICHMOND, VA., FOR THE YEAR 1907. Paper. Pp. 93. Richmond, Va.: Everett Waddey Co., 1908.

THE COMMON SENSE OF THE MILK QUESTION. By John Spargo. Cloth. Pp. 351. Illustrated. Price, $1.50. New York: The Macmillan Co., 1908.

TWENTY-THIRD ANNUAL REPORT ADIRONDACK COTTAGE SANITARIUM, with medical supplement. By Lawrason Brown.

THE NEW ENGLAND SANITARIUM. Paper. Pp. 32.

THE CHICAGO SESSION

AMERICAN MEDICAL ASSOCIATION, FIFTY-NINTH ANNUAL SESSION, CHICAGO, JUNE 2-5, 1908.

OFFICIAL CALL.

THE FIFTY-NINTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, TO BE HELD AT CHICAGO, JUNE 2-5, 1908.

The Fifty-Ninth Annual Session of the American Medical Association will be held on Tuesday, Wednesday, Thursday and Friday, June 2, 3, 4 and 5, 1908, at Chicago.

The House of Delegates will convene at 10 a. m., on Monday, June 1, 1908.

In the House of Delegates the representation of the various constituent associations for the years of 1907, 1908 and 1909 is as follows:

Alabama	3	Montana	1
Arizona	1	Nebraska	2
Arkansas	2	New Hampshire	1
California	3	New Jersey	3
Colorado	2	New Mexico	1
Connecticut	2	New York	11
Delaware	1	Nevada	1
Dist. of Columbia	1	North Carolina	3
Florida	1	North Dakota	1
Georgia	2	Oklahoma	2
Hawaii	1	Oregon	1
Idaho	1	Pennsylvania	8
Illinois	7	Rhode Island	1
Indiana	4	South Carolina	2
Iowa	3	South Dakota	1
Kansas	3	Tennessee	2
Kentucky	3	Texas	5
Louisiana	2	Utah	1
Maine	1	Vermont	1
Maryland	2	Virginia	3
Massachusetts	6	Washington	1
Michigan	4	West Virginia	1
Minnesota	2	Wisconsin	3
Mississippi	2	Wyoming	1
Missouri	4	Philippine Islands	1
Ohio	6		

The twelve sections of the American Medical Association, the Medical Department of the Army, the Medical Corps of the Navy and the Public Health and Marine-Hospital Service are entitled to one delegate each.

The first General Meeting, which constitutes the opening exercises of the scientific functions of the Association, will be held at 10:30 a. m., Tuesday, June 2.

The Registration Department will be open from 8:30 a. m. until 5 p. m., on Monday, Tuesday, Wednesday and Thursday, June 1, 2, 3 and 4, and from 9 to 10 a. m., on Friday, June 5.

JOSEPH D. BRYANT, President.

GEORGE H. SIMMONS, General Secretary.

HOUSE OF DELEGATES.

Membership of the Legislative Body of the American Medical Association, 1908.

As a number of the state associations have not yet held their meetings for 1908, it is impossible, at this time, to give a complete list of the members of the House of Delegates for the Chicago session. The following is a list of the holdover delegates and of the newly elected members who have been reported up to the time of going to press:

ALABAMA.

W. H. Sanders, Montgomery.
J. D. S. Davis, Birmingham.

ARKANSAS.

Adam Guthrie, Prescott.

CALIFORNIA.

Philip Mills Jones, San Francisco.
H. Bert Ellis, Los Angeles.

COLORADO.

J. N. Hall, Denver.
Crum Epler, Pueblo.

CONNECTICUT.

Chester Brown, Danbury.

IDAHO.

E. W. Kleinman, Hailey.

ILLINOIS.

C. S. Bacon, Chicago.
J. R. Hollowbush, Rock Island.
Frank Billings, Chicago.

INDIANA.

L. L. Whiteside, Franklin.
W. N. Wishard, Indianapolis.
J. B. Berteling, South Bend.
A. M. Hayden, Evansville.

IOWA.

S. Bailey, Mt. Ayr.

KANSAS.

H. L. Alkire, Topeka.

KENTUCKY.

L. S. McMurtry, Louisville.
W. W. Richmond, Clinton.
J. N. McCormick, Bowling Green.

LOUISIANA.

Charles McVea, Baton Rouge.

MARYLAND.

Harry Friedenwald, Baltimore.

MASSACHUSETTS.

D. J. Brown, Springfield.
C. H. Cook, Natick.
R. C. Cabot, Boston.
H. D. Arnold, Boston.
J. A. Gage, Lowell.
O. J. Brown, North Adams.

MICHIGAN.

Ruben Peterson, Ann Arbor.
H. O. Walker, Detroit.

MINNESOTA.

J. B. McGaughey, Winona.
A. E. Spalding, Luverne.

MISSISSIPPI.

W. W. Crawford, Hattiesburg.

MISSOURI.

C. M. Nicholson, St. Louis.
F. E. Murphy, Kansas City.

NEBRASKA.

F. A. Long, Madison.

NEW JERSEY.

Luther M. Halsey, Williamstown.

NEW MEXICO.

W. R. Tipton, Las Vegas.

NEW YORK

A. T. Bristow, Brooklyn.
Chas. Jewett, Brooklyn.
H. L. Elsner, Syracuse.
B. F. Weir, New York City.
W. S. Ely, Rochester.
H. D. Wey, Elmira.
E. B. Angell, Rochester.
J. C. Bierwirth, Brooklyn.
D. C. Moriarta, Saratoga.
Wisner R. Townsend, New York City.
A. Vander Veer, Albany.

NEVADA.

J. E. Pickard, Virginia City.

NORTH CAROLINA.

J. F. Highsmith, Fayetteville.

NORTH DAKOTA.

Victor Hugo Stickney, Dickinson.

OHIO.

Hugh F. Lorimer, Chillicothe.
Rufus Hall, Cincinnati.
Chas. Græfe, Sandusky.
Horace Bonner, Dayton.
D. W. Skeele, Cleveland.
W. D. Deuschle, Columbus.

OKLAHOMA.

A. K. West, Oklahoma City.
Virgil Berry, Wetumka.

OREGON.

Andrew C. Smith, Portland.

PENNSYLVANIA.

Adolph Kœnig, Pittsburg.
Fremont W. Frankhauser, Reading.
Wm. T. Williams, Mt. Carmel.
Samuel Wolfe, Philadelphia.
Alex. R. Craig, Philadelphia.
Philip Y. Eisenberg, Norristown.
Geo. W. Guthrie, Wilkes-Barre.
Edw. B. Heckel, Pittsburg.

SOUTH DAKOTA.

W. G. Smith, Sturgis.

TEXAS.

J. T. Wilson, Sherman.
C. E. Cantrell, Greenville.
A. C. Scott, Temple.
S. T. Turner, El Paso.
Frank Paschal, San Antonio.

VERMONT.

J. N. June, Burlington.

VIRGINIA.

J. Shelton Horsley, Richmond.
Wm. E. Anderson, Farmville.
Stuart McGuire, Richmond.

WASHINGTON.

James R. Yocum, Temple.

WEST VIRGINIA.

V. J. Churchman, Charlestown.

WISCONSIN.

L. H. Pelton, Waupaca.
W. T. Sarles, Sparta.
B. M. Caples, Waukesha.

SECTIONS.

PRACTICE OF MEDICINE.
Geo. Dock, Ann Arbor, Mich.

OBSTETRICS AND DISEASES OF WOMEN.
F. F. Simpson, Pittsburg.

SURGERY AND ANATOMY.
.....

OPHTHALMOLOGY.
W. Marple, New York City.

LARYNGOLOGY AND OTOLOGY.
Otto T. Freer, Chicago.

HYGIENE AND SANITARY SCIENCE.
N. K. Foster, Sacramento, Cal.

DISEASES OF CHILDREN.
Thomas Parke, Birmingham, Ala.

NERVOUS AND MENTAL DISEASES.
Morton Prince, Boston.

STOMATOLOGY.
M. L. Rhein, New York City.

CUTANEOUS MEDICINE AND SURGERY.
R. R. Campbell, Chicago.

PHARMACOLOGY AND THERAPEUTICS.
S. Solis Cohen, Philadelphia.

PATHOLOGY AND PHYSIOLOGY.
W. M. Coplin, Philadelphia.

GENERAL MEETINGS.

Opening Meeting.

Tuesday, June 2, 1908.

IN THE AUDITORIUM.

10:30 a. m.—Call to order by the President, Dr. Joseph D. Bryant, New York City.

Addresses of Welcome.

The report of the Committee of Arrangements, Dr. M. L. Harris, Chairman.

Introduction and installation of the President-Elect, Dr. Herbert L. Burrell, Boston.

Annual Address of the President.

Second General Meeting.

Tuesday, June 2, 7:30 p. m.

ORCHESTRA HALL, 165 MICHIGAN AVENUE.

At this meeting, the Oration on Medicine by Dr. William S. Thayer of Baltimore, and the Oration on Surgery, by Dr. George W. Crile of Cleveland, Ohio, will be delivered.

Third General Meeting.

Wednesday, June 3, 7:30 p. m.

ORCHESTRA HALL, 165 MICHIGAN AVENUE.

At this meeting the Oration on State Medicine by Dr. Charles Harrington of Boston will be delivered.

REGISTRATION.

The Registration Department will be on the main floor of the First Regiment Armory at Michigan Avenue and Sixteenth Street. It will be necessary for a member of the Association to register his name, and those of the ladies with him, and to obtain the official badges provided by the Committee of Arrangements. No one will be admitted to any entertainment without a badge. Members are urged to register on arrival or as early as possible.

The Registration Department will be open from 8:30 a. m. to 5 p. m. on Monday, Tuesday, Wednesday and Thursday, June 1, 2, 3 and 4, and on Friday, June 5, from 9 to 10 a. m.

Attention is called to the following directions:

1. Each physician desiring to register will first fill out a registration card.

2. Each member who has paid his annual dues in full will present his pocket card and registration card at a window marked "Registration by Receipt."

3. The registration of members who have paid their dues, but who have failed to bring their pocket cards will be delayed while the records are consulted. Hence, be sure to bring your "pocket card."

4. Members who have not paid their dues will present registration card and make payment at a window marked "Cash."

5. Each applicant for membership will present his registration card at a window marked "New Members," with a certificate of membership in his state society. Prospective members, however, will save delay and annoyance by sending in their applications before the session. All such applications should be mailed to the American Medical Association, 103 Dearborn Avenue, Chicago, so as to arrive not later than May 25.

6. Each member on registration will receive a badge, a copy of the Official Program, and such other announcements as may be necessary.

BUREAU OF INFORMATION.

A Bureau of Information will be maintained at the First Regiment Armory, where information with regard to hotels, transportation, registration, meeting places, exhibits, entertainments, theaters, etc., may be obtained. In connection with this bureau a branch postoffice and telegraph and telephone offices will be maintained.

POSTOFFICE AND TELEGRAPH.

Mail matter and telegrams addressed in care of the American Medical Association, Chicago, will be sent direct to the postoffice in the First Regiment Armory. Telegrams and special delivery letters will be forwarded from there to the hotels or other stopping places of those whose addresses are recorded at the Registration Department or the Bureau of Information.

TRANSPORTATION.

The Trunk Line Association, the Central Passenger Association and the New England Passenger Association have granted a rate of one and one-half fare for the round trip. Some of the other traffic associations may grant a similar reduction, but thus far no special rates have been made aside from those indicated. It is barely possible that still better rates may be secured, but there is not the kindly feeling on the part of the railroads toward the public that there was previous to the recent legislation. If further changes are made, due announcements will appear in THE JOURNAL. As the time at which the special tickets will go on sale varies with different localities, members should consult local railroad officials for definite information.

COMMITTEE ON ARRANGEMENTS.

The Chicago Session of the American Medical Association—Committees in Charge.

The following Chicago physicians are the members of the Committee of Arrangements for the coming session of the American Medical Association in Chicago, June 2 to 5, 1908. For information on matters relating to the functions of the various committees address the chairmen.

CHAIRMAN: Dr. M. L. Harris, 100 State St.

SECRETARY: Dr. R. R. Campbell, 100 State St.

Dr. H. B. Favill, 100 State St., president of Chicago Medical Society.

Dr. W. L. Baum, 103 State St., president of Illinois State Medical Society.

The following members of the committee are also chairmen of the various subcommittees specified:

FINANCE: Dr. Frank Billings, 100 State St.

HALLS AND MEETING PLACES: Dr. Hugh T. Patrick, 34 Washington St.

HOTELS: Dr. L. L. McArthur, 100 State St.

RECEPTIONS AT RAILROAD STATIONS: Dr. J. H. Stowell, 103 State St.

ENTERTAINMENTS: Dr. T. A. Woodruff, 72 East Madison St.

BUREAU OF INFORMATION: Dr. J. V. Fowler, 312 Grand Ave.

CLINICS: Dr. A. J. Ochsner, 710 Sedgwick St.

SCIENTIFIC EXHIBIT: Dr. E. R. LeCount, 6026 Monroe Ave.

PRINTING, BADGES, ETC.: Dr. C. P. Caldwell, 4425 Michigan Ave.

ALUMNI MEETINGS, ETC.: Dr. R. T. Gillmore, 103 State St.

ACCOMMODATIONS FOR VISITING MEMBERS.

A Partial List of Hotels.

Members of the American Medical Association desirous of securing definite hotel accommodations should write to Dr. L. L. McArthur, chairman of the Hotels Committee, 100 State Street, Chicago.

Arrangements have been made with the leading hotels for this meeting. Definite instructions to the chairman, as to the character of rooms desired, with or without bath, meals, etc., and number in party, will permit prompt action and more satisfactory reservation.

No section headquarters at hotels have been assigned. The members are therefore at liberty to select the hotel of their choice. Reservations will be made in the order of their receipt.

A partial list of hotels, with rates and locations, follows. Where not otherwise designated, the rates are for rooms on the European plan.

AUDITORIUM HOTEL, see Congress.

BRIGGS HOUSE, Randolph Street and Fifth Avenue; 150 rooms; can take 50; rates for one person in room, $1 to $1.50; bath, $2 to $2.50; additional, $1 for each person.

HOTEL BREVOORT, 143 Madison Street; 350 rooms; can take 200; rates, one person, $1.50 and up; two in room, $3 and up.

HOTEL BISMARK, 178 Randolph Street; 100 rooms; can take 25; rates, one person, $1 up; two persons in room, $1.75 up.

CONGRESS HOTEL COMPANY, Michigan Avenue and Congress Street (operating Congress, Auditorium and Annex); 1,500 rooms; can accommodate 1,400 to 1,600; rate for one person, $2 to $7; two or more persons in room, $3 to $10.

HOTEL DEL PRADO, Midway Boulevard and Jackson Park; 100 rooms; can take 200; rates, American plan, $3 to $4 per day; two or more in room, $5 to $7 per day.

HUNT'S EUROPEAN HOTEL, 146 Dearborn Street; 105 rooms; can take 50; rates $1 and $2; additional, $0.75 each.

GREAT NORTHERN HOTEL, Jackson Boulevard, Dearborn and Quincy Streets; 375 rooms; can take 300; rates, one person, $1.50 to $4; two persons, $2.50 to $6; additional, $1 each.

KAISERHOF HOTEL, 270 Clark Street; 300 rooms; can take 300; rates, one person, $1 to $1.50; with bath, $2 to $3; additional person in room, $2 to $3; with baths, $3 to $5.

LAKOTA HOTEL, Thirtieth Street and Michigan Boulevard; 250 rooms; can take 500; rates, European plan, $3 up; two persons in room, $2 up; American plan, rates on application.

LEXINGTON HOTEL, Michigan Boulevard and Twenty-second Street; 400 rooms; can take 150; rates, one person, $1.50 up; additional persons, $1 and up; rooms with private bath, $2 single; $1.50 double.

HOTEL MAJESTIC, 20 Quincy Street; 200 rooms; can take 200; rates, one person, $2.50; two persons, $4.

MCCOY'S EUROPEAN HOTEL, northwest corner Clark and Van Buren Streets; 200 rooms; can take 150; rates, one person, $1.50; additional persons in room, $1 up.

HOTEL METROPOLE, Michigan Avenue and Twenty-third Street; 300 rooms; can take 250; rates, for one person in room, $2 per day and up; for two or more persons in a room, $1.50 and up.

OXFORD HOTEL, Canal and Adams Streets; opposite Union Depot; 70 rooms; can take 40; $2 per day, American plan.

PALMER HOUSE, State and Monroe Streets; 700 rooms; can take 500; rates, one person, $1.50 and up without bath; two persons in room, $2 and up; with bath, $2.50 and up one person, and $3.50 and up two persons.

SARATOGA EUROPEAN HOTEL, 151 Dearborn Street; 318 rooms; can take 300; rates, one person, $1 up; two persons, $2 up; with baths, $1.50 up; three or more persons in room, special rates.

SHERMAN HOUSE, Clark and Randolph Streets; 200 rooms; can take 500; rates, one person, $1.50 up; additional persons, $1.25 each.

NEW SOUTHERN HOTEL, Michigan Boulevard and Thirteenth Street; 75 rooms; can take 25; rate, $1 to $1.50 per day; additional persons in room, $1.

STRATFORD HOTEL, Jackson and Michigan Boulevards; 200 rooms; can take 400; rates, $2 to $3 without bath; two in room; $4 with bath.

VICTORIA HOTEL, Michigan Boulevard and Van Buren Street; 200 rooms; can take 300; rates, for one person, $1.50 up; with bath, $2.50 to $4; two in a room, $3 to $4; with bath, $4 to $6; double room, with two beds, two persons, $2 each; four persons, $1.25 each; with bath, two persons, $2.50 each, four persons, $1.50 each.

VIRGINIA HOTEL, Rush and Ohio Streets; 400 rooms; can take 250; one person, $1.50 up; two persons in room, $2 per day and up.

WELLINGTON HOTEL, Wabash Avenue and Jackson Boulevard; 150 rooms; can take 150; rates, for one person, $2 per day and up; two persons, $3 and up; with bath, one person, $3 and up; with bath, two persons, $5 and up; with bath, three persons, $7.50 and up; with bath, four persons, $8.50 and up.

WINDERMERE HOTEL, Fifty-sixth Street and Cornell Avenue; 250 rooms; can take 25 to 30; rates, $3 per day and up; two in room, $5 per day and up; American plan only.

WINDSOR-CLIFTON HOTEL, Monroe Street and Wabash Avenue; 165 rooms; can take 200; rates, one person, $1 per day and up; additional, same.

Private Homes and Boarding Houses.

The committee also has made arrangements with H. Bates of the Reliable Renting Company, by which it will be possible to locate in private homes and boarding houses those preferring such accommodations. Letters should be addressed directly to H. Bates, care of the Reliable Renting Company, 171 Washington Street, Chicago. On failure to receive prompt reply notify Dr. McArthur.

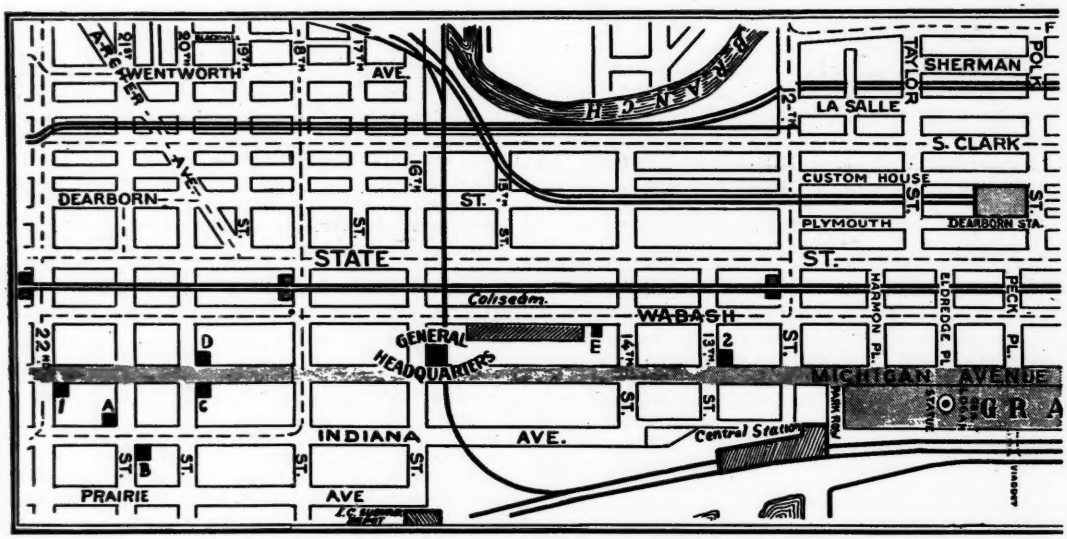
THE MEETING PLACES.

Where the Sessions Will Meet.

The following is a list of meeting places for the Sections as at present arranged:

PRACTICE OF MEDICINE—Sinai Temple, Twenty-first Street and Indiana Avenue.

OBSTETRICS AND DISEASES OF WOMEN—Second Presbyterian Church, Twentieth Street and Michigan Avenue.



MAP OF BUSINESS DISTRICT OF CHICAGO.—KEY TO MEETING PLACES.

General Meetings, Auditorium Theater, F.
Practice of Medicine, Sinai Temple, A.
Obstetrics and Diseases of Women, Second Presbyterian Church, D.
Surgery and Anatomy, Orchestra Hall, G.
Hygiene and Sanitary Science, First Regiment Armory, General Headquarters.
Ophthalmology, First Presbyterian Church, B.
Diseases of Children, Second Presbyterian Church, D.
Stomatology, First Regiment Armory, General Headquarters.
Nervous and Mental Diseases, Calumet Club, C.
Cutaneous Medicine and Surgery, Grace Parish House, E.
Laryngology and Otology, Sinai Temple, A.
Pharmacology and Therapeutics, First Presbyterian Church, B.
Pathology and Physiology, First Regiment Armory, General Headquarters.

HOTELS.

Auditorium Hotel, 3b; Auditorium Hotel Annex, 3a; Bismark Hotel, 16; Briggs House, 17; Brevoort, 15; Great Northern Hotel, 8; Hunt's European Hotel, 14; Kaiserhof Hotel, 7; Lexington Hotel, 1; Majestic, 9; McCoy's European Hotel, 6; New Southern

SURGERY AND ANATOMY—Orchestra Hall, 169 Michigan Avenue.
HYGIENE AND SANITARY SCIENCE—Second Presbyterian Church, upstairs, Twentieth Street and Michigan Avenue.
OPHTHALMOLOGY—First Presbyterian Church, Twenty-first Street and Indiana Avenue.
DISEASES OF CHILDREN—Second Presbyterian Church, Chapel, Twentieth Street and Michigan Avenue.
STOMATOLOGY—First Regiment Armory, Sixteenth Street and Michigan Avenue.
NERVOUS AND MENTAL DISEASES—Calumet Club, Twentieth Street and Michigan Avenue.
CUTANEOUS MEDICINE AND SURGERY—Grace Episcopal Church Parish House, Fourteenth Street and Wabash Avenue.
LARYNGOLOGY AND OTOLOGY—Sinai Temple, Twenty-first Street and Indiana Avenue.
PHARMACOLOGY AND THERAPEUTICS—First Presbyterian Church, Twenty-first Street and Indiana Avenue.
PATHOLOGY AND PHYSIOLOGY—First Regiment Armory, Sixteenth Street and Michigan Avenue.
HOUSE OF DELEGATES—First Regiment Armory, Sixteenth Street and Michigan Avenue.

On Wednesday afternoon the Sections on the Practice of Medicine and on Pathology and Physiology will have a joint meeting in the meeting place of the former, and on the same afternoon the Section on Stomatology will occupy the room in the Armory otherwise used by the Section on Pathology and Physiology.

ENTERTAINMENTS.

Receptions, Concerts, Entertainments, Excursions and Afternoon Teas for the Pleasure of Visitors.

For the entertainment of the members of the Association and their friends during and following the session the committee has arranged numerous informal and formal functions.

TUESDAY, JUNE 2.

An informal tea to the ladies will be held in the rooms of the Woman's Club and of the Fortnightly Club on Tuesday afternoon from 3 until 5 o'clock. Tuesday evening has been set aside for Section dinners and entertainments and for alumni reunions. The following are reported as having been arranged:

Section on Ophthalmology at the Chicago Athletic Club.
Section on Surgery and Anatomy at the Lexington Hotel.
Section on Laryngology and Otology at the Auditorium Hotel

The alumni headquarters will be the main parlor of the second floor of the Auditorium Hotel, at Michigan Avenue and Congress Street. The following reunions will take place Tuesday evening:

College of Physicians and Surgeons, Chicago, at the Auditorium Hotel at 6:30 p. m.

Dartmouth Medical College; reunion and supper at the new Illinois Athletic Club.

Johns Hopkins Medical School; dinner and reunion at the Auditorium Hotel.

Kentucky School of Medicine; dinner and musicale at the Auditorium Hotel at 6:30 p. m.

McGill University; reunion and dinner at the Great Northern Hotel.

Northwestern University Medical School; banquet and vaudeville at 6 p. m. at new Illinois Athletic Club.

Rush Medical College; annual meeting and dinner at the Sherman House.

University of Michigan; dinner and smoker at the Union Restaurant.

University of Pennsylvania, Medical Department; dinner and musicale at the Chicago Athletic Club.

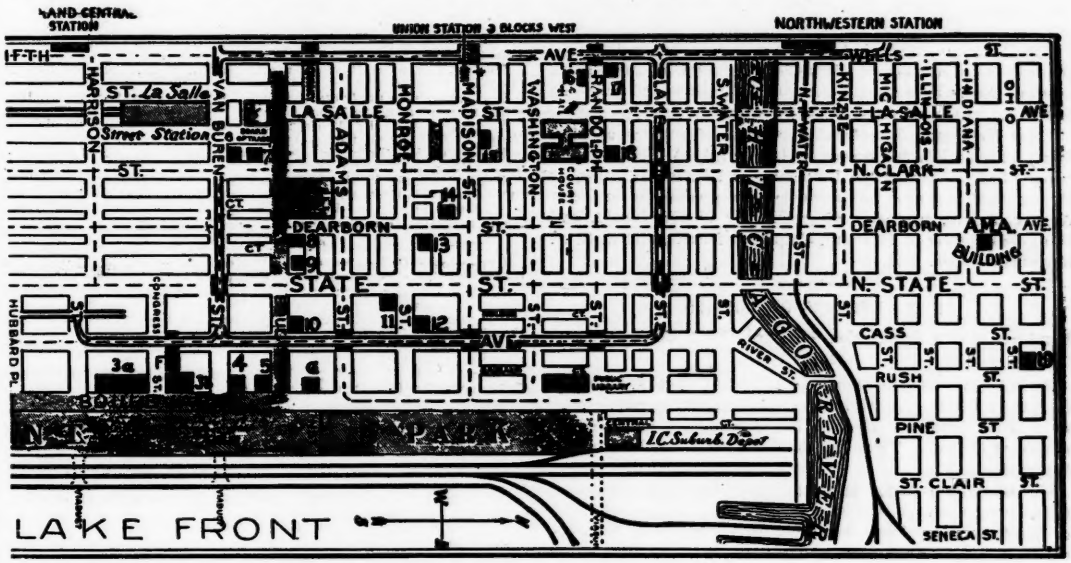
Medical College of Ohio; smoker and entertainment at the Bismarck.

Harvard Medical School; dinner and reunion at the Great Northern Hotel.

Detroit College of Medicine; reception at 468 La Salle Ave.

Tulane University Medical Deparment; dinner and reunion at the Union Hotel.

Arrangements are being made for several other reunions, but the plans have not been completed as yet.



MEETING PLACES, HOTELS AND RAILROAD STATIONS.

HOTELS—CONTINUED.

Hotel, 2; Palmer House, 11; Saratoga European Hotel, 13; Sherman House, 18; Stratford Hotel, 5; Victoria Hotel, 4; Virginia Hotel, 19; Wellington Hotel, 10; and the Windsor-Clifton Hotel, 12.

RAILROAD TERMINAL STATIONS.

Central Station, Park Row, near lake front, receives Chi., Cin. & L'ville.; Big Four; Grand Rapids & Ind.; Ill. Central, and Wis. Central.

Dearborn Station (Polk Street Station), Polk Street and Plymouth Court, receives the Santa Fé; Erie; Monon; Chi. & West. Ind.; Belt Line; Grand Trunk; and Wabash.

Grand Central Station, Harrison Street and Fifth Avenue, receives the B. & O.; Great Western; and Pere Marquette.

La Salle Street Station, La Salle and Van Buren Streets, receives the Chi. & East. Ill.; Chi., Ind. & Southern; Rock Island; Lake Shore & Mich. Southern, and Nickel Plate.

Northwestern Station, Wells and Kinzie Streets, receives the Chi. & Northwestern.

Union Station, Canal and Adams Streets (not shown on map), receives C., B. & Q.; C., M. & St. P.; Chi. & Alton lines; Panhandle; Pittsburg, Ft. Wayne & Chicago.

The Women Alumnæ will hold a banquet and vaudeville at the Auditorium Hotel.

WEDNESDAY, JUNE 3.

On Wednesday afternoon from 2:30 until 5 a reception will be given at the South Shore Country Club to meet Mrs. Herbert L. Burrell, wife of the president-elect of the Association. In the evening, from 8:30 until 10, a reception will be given to the president-elect of the Association, Dr. H. L. Burrell. There will be dancing from 10 to 12.

THURSDAY, JUNE 4.

A reception and musicale will be given Thursday afternoon, in the Art Institute to the visiting ladies. In the evening a concert by the First Regiment Band and a smoker will be given at the Coliseum by the medical profession of Chicago to the visiting members of the Association and their guests.

Seeing Chicago.

For those who wish to ride through the parks and residential portions of Chicago, automobiles will leave central points at stated hours during the day.

Many of the visiting members and their friends will doubtless be interested in visiting the enormous plants of the Illinois Steel Company at South Chicago. The management of this company has offered to furnish guides to those who desire to go through the mills.

Messrs. Armour & Company, Swift & Company and Libby, McNeal & Libby have extended an invitation to the members of the American Medical Association to witness a demonstration of the government inspection of meat and killing of cattle. On Saturday morning, June 6, a special train of the South Side Elevated Railway will leave Congress Street station at 9 o'clock.

THE FOREIGN GUESTS.

Distinguished Medical Men Who Will Come from Abroad to Speak at Section Meetings.

The American Medical Association will be honored by the presence of a number of distinguished guests at the coming session. Many have already accepted invitations and below we give a list of the guests so far as now known:

Ernst Ferdinand Sauerbruch, professor of surgery at Marburg; Charles Edward Beevor of London; E. A. Schäfer, professor of physiology at the University of Edinburgh; Johannes Pfannenstiel, professor of obstetrics and gynecology at Kiel; August Martin, professor of gynecology at Greifswald, and Professors Brauer of Marburg, Chipault of Paris, and B. G. A. Moynihan, Leeds, Eng.

THE PROGRAM OF CLINICS.

Members of the Association to Have Great Clinical Opportunities.

During the week preceding and the two weeks following the session of the American Medical Association, public clinics will be given in all the larger hospitals and medical schools of Chicago. These will be free to the members of the Association.

The committee states that the program of the clinics is almost completed. It will contain the names and addresses of all hospitals and colleges in which clinics are to be held, together with directions for reaching them. For each day there will be a list of clinics in every department of medicine and surgery, giving place and hour and name of instructor for each clinic, so that visitors may choose either according to subjects or according to instructors.

Hospitals having small amphitheaters will issue tickets, which may be obtained at headquarters, in order that clinics may not be uncomfortably crowded. A number of clinics will be conducted in various hospitals at the same hours, which will make it possible for every one who desires to do clinical work during this period to obtain ample facilities in whatever department he may be especially interested.

On June 2, 3, 4 and 5 there will be no clinics or demonstrations in any of these institutions in order that there may be nothing to take members away from the various scientific sections. This will insure a local as well as a general audience for those who have prepared papers. Practitioners from many parts of the country have already arranged to spend two or three weeks in Chicago in connection with the coming meeting.

Programs will be obtainable at all hospitals and colleges on and after Monday, May 25. During the meeting of the Association these programs may be obtained at the Bureau of Information. After May 15 and before the meeting, copies will be mailed on application to the chairman of the Committee on Clinics, Dr. Albert J. Ochsner, 710 Sedgwick Street, Chicago.

St. Louis Clinics.

For the benefit of members of the Association who may be in St. Louis at that time a series of lectures and clinics will be held. These exercises will be conducted under the auspices of the Medical Department of Washington University, and will commence Tuesday, May 26, and continue until Monday, June 1. The schedule of lectures and clinics follows:

TUESDAY, MAY 26.

Obstetric Clinic, by Professor Schwarz, at Washington University Hospital, from 9 to 11 a. m.
Medical Clinic, by Clinic Professor Brookes, at O'Fallon Dispensary, from 11 a. m. to 12 m.
Clinic on Diseases of the Nose and Throat, by Clinic Professor Sluder, at O'Fallon Dispensary, from 2 to 3 p. m.
Proctologic Clinic, by Clinic Professor Dixon, at Washington University Hospital, from 2 to 4 p. m.
Orthopedic Clinic, by Dr. Hoffman, at O'Fallon Dispensary, from 3 to 4 p. m.

WEDNESDAY, MAY 27.

Surgical Clinic, by Professor Mudd, at St. Luke's Hospital, from 9 a. m. to 12 m.
Surgical Clinic, by Professor Bartlett, at St. Anthony's Hospital, from 9 a. m. to 12 m.
Uranalytic Demonstration, by Professor Warren, at College Building, from 1 to 2 p. m.
Otologic Clinic, by Professor Shapleigh, at the O'Fallon Dispensary, from 2 to 3 p. m.
Anatomic Demonstrations, illustrated with the epidiascope, by Professor Terry, at College Building, from 3 to 4 p. m.
Physiology and Surgery of the Blood Vessels, with Demonstrations by Professor Guthrie, at College Building, from 4 to 5 p. m.

THURSDAY, MAY 28.

Gynecologic Clinic, by Professor Glasgow, at St. Louis Mullanphy Hospital, from 9 to 10 a. m.
Medical Clinic, by Prof. Ellsworth Smith, at St. Louis Mullanphy Hospital, from 10 to 11 a. m.
Medical Clinic, by Professor Steer, at St. Louis Mullanphy Hospital, from 11 a. m. to 12 m.
Surgical Clinic, by Professor Carson, at St. Louis Mullanphy Hospital, from 12 m. to 1 p. m.
Dermatologic Clinic, by Professor Grindon, at St. Louis Mullanphy Hospital, from 1 to 2 p. m.
Ophthalmologic Clinic, by Clinic Prof. A. E. Ewing, Clinic Lecturer W. A. Shoemaker, Clinic Lecturer J. W. Charles, Instructors J. H. Gross and N. M. Semple, and Dr. J. F. Shoemaker, at O'Fallon Dispensary, from 3 to 5 p. m.

FRIDAY, MAY 29.

Gynecologic Clinic, by Clinic Professor Crossen, at Washington University Hospital, from 9 to 11 a. m.
Medical Clinic, by Professor Fischel and Clinic Prof. A. E. Taussig, at Washington University Hospital, from 11 a. m. to 1 p. m.
Otologic Clinic, by Prof. H. N. Spencer, at Washington University Hospital, from 1 to 2 p. m.
Surgical Clinic, by Professor Tuholske, at Washington University Hospital, from 2 to 4 p. m.
Neurologic Clinic, by Clinic Prof. Given Campbell, at Washington University Hospital, from 4 to 5 p. m.

SATURDAY, MAY 30.

Clinics by Professor Saunders, Clinic Professor Zahorsky and Drs. A. Levy and W. L. Johnson, at Bethesda Home, from 9 a. m. to 12 m.
Surgical Clinic, by Professor Bartlett, at St. Anthony's Hospital, from 9 a. m. to 12 m.
Orthopedic Clinic, by Dr. Allison, at Martha Parsons Hospital, from 2 to 4 p. m.

MONDAY, JUNE 1.

Surgical Clinic, by Professor Tuholske, at Jewish Hospital, from 9 a. m. to 12 m.
Surgical Clinic, by Professor Mudd, at St. Luke's Hospital, from 9 to 11 a. m.
Clinic on Pulmonary and Cardiac Diseases, by Clinic Professor Behrens, from 2 to 3 p. m.
Rhinologic Clinic, by Dr. Creveling, at Washington University Hospital, from 2 to 3 p. m.
Ophthalmologic Clinic, by Clinic Professor Wolfner and Dr. Wiener, at Washington University Hospital, from 3 to 4 p. m.

THE SCIENTIFIC EXHIBIT.

Announcement of Plans for the Scientific Exhibit at Chicago Session in June.

The patronage of the Scientific Exhibit at the Chicago session of the American Medical Association will come largely

Fig. 1.—A panoramic view of Chicago from the water-front, looking west, showing some of the buildings on Michigan Avenue.

from the cities of the Mississippi and Ohio valleys. There will, of course, be a few devoted to the great cause who will send exhibits from distant points. The magnificent contributions made by the laboratories and museums of the east at the Boston and Atlantic City sessions will be difficult to equal. We have faith, however, in the energy and progressiveness of the men in the middle west to hold up the high standard set by the east. Our hope that the Chicago session will have a successful exhibit is still further supported by the fact that a number of persons from remote parts of the country have announced their intention to participate.

It is desired at this time to call especial attention to some new features in the exhibit which should appeal particularly to sanitarians and research workers.

A gold medal will be awarded for the best tuberculosis exhibit. Competing exhibits will be graded, however, on compactness consistent with elucidation of the whole tuberculosis problem.

The exhibit idea for instructing the public is perhaps the most practical and widely useful method thus far employed. It must have impressed every practical mind that tuberculosis exhibits thus far offered to the public have been large, cumbersome and expensive to maintain. The aim of the committee is to secure a model small exhibit, which at the same time is comprehensive. Such should be easily portable and adapted to installation in public libraries, railway stations and similar public places. Public health departments would find in such a compact exhibit a most valuable means of disseminating knowledge concerning this great sanitary question. A number have already signified their intention to participate in this contest, and it is not too much to hope that a satisfactory working model will be secured for the guidance of sanitarians.

Another gold medal will be offered for the best research exhibit.

All correspondence relating to this subject as well as demonstrations (lantern, gross or microscopic) should be directed to Dr. E. R. LeCount, Rush Medical College, Chicago.

Gross specimens will be demonstrated by a corps of competent assistants under the direction of Dr. LeCount. The visitors will be taken systematically in small groups around the collection, the demonstrator calling attention to salient points of specimens. The plan is greatly preferable to putting trust in labels. It insures the teaching of a practical lesson to the observer.

Of interest, certainly, to exhibitors, will be the announcement that very handsome certificates of honor will be granted to a few of those presenting exhibits of superior character. The committee on awards for medals and certificates will consist of three members of the Association of national standing whose judgment and fairness will not be questioned.

Correspondence concerning the tuberculosis exhibits should be addressed to the director, Dr. Frank B. Wynn, 311 Newton-Claypool Building, Indianapolis.

FRANK B. WYNN,
Director,
W. M. LATE COPLIN,
E. R. LECOUNT,
Committee on Scientific Exhibit.

Fig. 2.—The American Medical Association's Building, located at 103 Dearborn Avenue. In this building are the editorial and business offices and the printing plant of THE JOURNAL.

SECTION PROGRAMS.

The following is a partial list of titles of papers to be read before the various sections. The order here is not necessarily the order which will be followed in the Official Program. This Official Program will be similar to those issued in previous years, and will contain the final program of each section, with abstracts of the papers, lists of committees, programs of the General Meetings and of the meetings of the House of Delegates, lists of entertainments, map of Chicago, etc. To prevent misunderstandings and to protect the interests of advertisers, etc., it is here announced that this Official Program will contain no advertisements. It is copyrighted by the American Medical Association and will not be distributed before the session. A copy will be given to each member on registration.

SECTION ON PRACTICE OF MEDICINE.

CHAIRMAN, C. F. HOOVER, CLEVELAND, OHIO; SECRETARY, JOSEPH L. MILLER, CHICAGO.

Chairman's Address: Paroxysmal Hematuria. C. F. Hoover, Cleveland.

A Case of Syphilitic Infection of Fourteen Years' Duration with Protracted and Unusual Febrile Symptoms. Henry C. Buswell, Buffalo.

Endarteritic Gangrene in Early Life. David Riesman, Philadelphia.

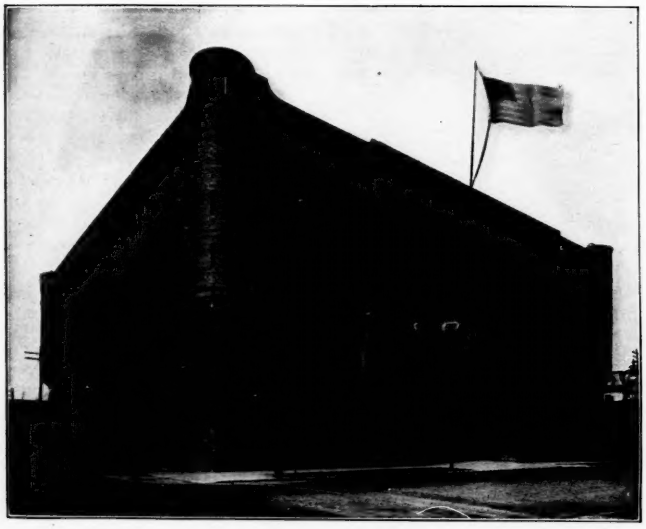


Fig. 3.—The First Regiment Armory at Michigan Avenue and Sixteenth Street. In this building will be the Scientific and Commercial Exhibits; the Place of Registration, Information Bureau and Postoffice. Diagrams of the internal arrangement are given on page 1486.

Modification of Typhoid During Menstruation, and the Successive Menstrual Epochs; Treatment. Alfred Stengel, Phila.

The Pathology, Diagnosis and Treatment of So-called Hodgkin's Disease. Hugo A. Freund, Detroit.

Absolutely Irregular Hearts. A. W. Hewlett, San Francisco.

Factors in Estimation of Blood Pressure, the Tonometer of von Recklinghausen. Joseph Eichberg, Cincinnati.

Serotherapy of Meningitis. L. W. Ladd, Cleveland.

Experiments on a Salt Free Diet, with Especial Reference to Diabetes Mellitus. E. P. Joslin and H. W. Goodall, Boston.

Physics of Physical Signs. H. D. Arnold, Boston.

Diagnostic Value of Cutaneous and Conjunctival Tuberculin Reactions. W. Engelbach and J. W. Shankland, St. Louis.

Clinical Manifestations of Cardiovascular Disease. Frank A. Jones, Memphis, Tenn.

Disguised Starvation. Nathan Rosewater, Cleveland, Ohio.

Viscosity of the Blood in Its Clinical Application. George W. McCaskey, Fort Wayne, Ind.

Causes of High Arterial Tension. L. F. Bishop, New York.

Cardiac Aneurism, with Report of a Case Associated with Mediastino-Pericarditis. James B. McElroy, Memphis, Tenn.

Temporary Periods of Improvement in Pernicious Anemia. Walter L. Bierring, Iowa City, Iowa.

A Clinical Method of Determining the Chlorid Content of the Blood. Douglas Vander Hoof, Richmond, Va.

Clinical Aspects of Certain Mediastinal Tumors. Frank Smithies, Ann Arbor, Mich.

The Influence on Practice of Recent Studies of the Circulation. A. D. Hirschfelder, Baltimore.

An Epidemic of Trichiniasis. S. Marx White, Minneapolis.

The Clinical Value of the Quantitative Estimation of Pepsin, C. B. Farr and E. H. Goodman, Philadelphia.

Epidemic of Pellagra. R. H. Bellamy, Wilmington, N. C.

The Value of Nitrogen Insufflation into the Pleura in the Treatment of Severe Forms of Unilateral Pulmonary Tuberculosis. Ludolph Brauer, Marburg, Germany.

Phases of Duodenal Ulcer. C. Graham, Rochester, Minn.

Compensatory Diarrhea. Heinrich Stern, New York.

Tuberculin Therapy. H. B. Weaver, Asheville, N. C.

Symposium on Typhoid Fever.

Conditions Similating Perforation in Typhoid. David L. Edsall, Philadelphia.

Channels of Infection in Relation to Suppression of Typhoid. M. J. Rosenau, Washington, D. C.

Treatment of Typhoid. Thos. McCrae, Baltimore.

SECTION ON SURGERY AND ANATOMY.

CHAIRMAN, RUDOLPH MATAS, NEW ORLEANS; SECRETARY, WILLARD BARTLETT, ST. LOUIS.

Symposium on Surgery of Vascular System.

Observations, Clinical and Experimental, on Occlusion of the Abdominal and Thoracic Aortas. W. S. Halsted, Baltimore.

Physiologic Aspects of Blood Vessel Surgery with Demonstrations. C. C. Guthrie, St. Louis.

Results of the Transplantation of Blood Vessels and Organs (Lantern Slides). A. Carrel, New York.

A Statistical Summary of the Surgical Treatment of Aneurism by the Intrasaccular Method (Endo-aneurismorraphy). Rudolph Matas, New Orleans.

Symposium on the Technic of Cranial Surgery.

The Surgery of the Base of the Skull. Professor Chipault, Paris, France.

Lantern Slide Demonstrations on Cranial Technic. Harvey Cushing, Baltimore; Frank Hartley, New York; C. H. Frazier, Philadelphia.

Intracranial Complications of Ear and Nose Diseases. J. F. McKernon and C. G. Coakley, New York.

Symposium on Artificial Respiration.

Artificial Respiration in Its Physiologic Aspects. Professor Schaefer, Edinburgh, Scotland.

Positive Pressure in the Surgery of the Chest. Professor Brauer, Marburg, Germany.

Negative Pressure in the Surgery of the Chest. Dr. Sauerbruch, Marburg, Germany.

Fig. 4.—The Coliseum, situated on Wabash Avenue, near Sixteenth Street. Here will be given the president's reception and ball, and the entertainment on Thursday evening. This structure, which has a floor space of over two acres and a seating capacity of 15,000, will be the meeting place of the Republican National Convention, which opens June 16, 1908.

Artificial Intrapulmonary Positive Pressure. Experimental Applications in Surgery of the Lung. Samuel Robinson, Boston; N. W. Green, New York.

Local Applications in Surgery. James E. Moore Minneapolis.

Atavism in Facial Contours (Lantern). V. P. Blair, St. Louis.

Bier's Hyperemia. J. F. Binnie, Kansas City, Mo.

Observations on the Thyroid and Parathyroid. Herman Tuholske, St. Louis.

The Surgical Importance of Cervical Ribs. John B. Roberts, Philadelphia.

A Study of Anterior Poliomyelitis, with an Analysis of 647 Cases, from the Children's Hospital, Boston. R. W. Lovett, Boston.

A Successful Ligation of the Innominate Artery, with Presentation of Patient. William Britt Burns, Memphis, Tenn.

Surgery of the Upper Abdomen. B. G. A. Moynihan, Leeds, England.

The Diagnosis at Operation Between Chronic Ulcer and Cancer of the Stomach. F. B. Lund, Boston.

Ulcer of the Duodenum. William J. Mayo, Rochester, Minn.

The Surgical Diseases of the Pancreas. John B. Deaver, Philadelphia.

Pancreatitis in Its Relation to Gallstone Disease. W. D. Haggard, Nashville, Tenn.

The Cause of Death in High Intestinal Obstruction, as Demonstrated by Surgical Experimentation. J. W. D. Maury, New York.

Intestinal Anastomosis. Presentation of a New, Simple and Aseptic Method. Frank B. Walker, Detroit.

A Report on a Series of Abdominal Gunshot Wounds. Cunningham Wilson, Birmingham, Ala.

Invagination of Limited Annular Gangrene of the Small Bowel, versus Resection. J. E. Summers, Omaha.

Gas Cysts of the Intestine. J. M. T. Finney, Baltimore.

The Reports of a Case of Chronic Peritonitis with Complete Obstruction Caused by Numerous Transverse Constrictions of a Previously Undescribed Character Throughout the Intestine. Miles F. Porter, Ft. Wayne, Ind.

The Effects of Normal and Abnormal Variations in Peristalsis on Peritoneal Absorption. J. L. Yates, Milwaukee.

My Present Position on Appendix Questions. Robert T. Morris, New York.

A Case of Acute Diverticulitis of the Sigmoid Operated on Before Rupture Had Taken Place. George Emerson Brewer, New York.

Cancer of the Rectum. Deductions Derived from One Hundred Personal Experiences in Extirpation of the Rectum and Sigmoid. James P. Tuttle, New York.

Enterovesical Fistula, with Especial Reference to Its Surgical Treatment. F. W. Parham and Joseph Hume, New Orleans.

A New and Rapid Method of Perineal Drainage in Suprapubic Cystotomy. Joseph Ransohoff, Cincinnati.

The Preservation of Anatomic Dissections with Permanent Color of Muscles, Vessels and Organs by a New Method. Preliminary Note. Edmond Souchon, New Orleans.

Demonstration of Patients Operated on for Cleft Palate. T. W. Brophy, Chicago.

Abstracted Report of the Anesthesia Commission. Chairman, J. G. Mumford, Boston.

Some New Facts Regarding Calculi and Tumors of the Bladder. Carl Beck, New York.

Fig. 5.—A view of State Street in the shopping district.

SECTION ON PATHOLOGY AND PHYSIOLOGY.

CHAIRMAN, W. B. CANNON, BOSTON; SECRETARY, M. J. ROSENAU, WASHINGTON, D. C.

Chairman's Address. Walter B. Cannon, Boston.

A Critic of Some of the More Recent Work and Ideas on Nutrition. L. Breisacher, Detroit.

Some Observations on (a) Growth of Hen, (b) Egg Production, (c) Weight of Eggs, (d) Fertility of Eggs, and (e) Size of Chicks After Extirpation and Transplantation of Ovaries in Chickens. C. C. Guthrie, St. Louis.

Experiments Toward a Physiologically Isotonic Solution of Salts. Herman M. Adler, Boston.

Chloroform Necrosis of the Liver. H. Gideon Wells, Chicago.

Safeguards of the Heart. Henry Sewall, Denver.

Some New Statistics on Blood Plates and Some New Practical Points on Counting Them. George T. Kemp, with the collaboration of C. W. Yeck and Carl Ten Broeck, Urbana, Ill.

The Cleavage of Bacterial Proteids by Exposure to Direct Sunlight. Victor C. Vaughan, Ann Arbor.

Anaphylaxis Induced by Bacterial Proteids. D. H. Bergey, Philadelphia.

Therapeutic Immunization in Mixed Infections. A. P. Ohlmacher, Detroit.

Serum Diagnosis of Syphilis. William J. Butler, Chicago.

Histoplasma Capsulatum. Samuel T. Darling, Ancon, Panama.

Some Phases of Mycotic Diseases. L. H. Pammel, Ames, Iowa.

Demonstration of Diseased Conditions of the Appendix. E. R. Le Count, Chicago.

Symposium on Typhoid.

Treatment of Typhoid. Thomas McCrae, Baltimore.

Symptoms Resembling Perforation in Typhoid. D. L. Edsall, Philadelphia.

Typhoid Bacillus Carriers. William H. Park, New York.

The Value of Blood Cultures. Francis W. Peabody, Boston.

The Metabolism of Typhoid Fever. P. A. Shaffer, New York.

The Channels of Infection, with Special Reference to Suppression of Typhoid Fever. M. J. Rosenau, Washington.

The Alleged Urinary Manifestations of Disease of the Pancreas. J. Henry Schroeder, Cincinnati.

Some Observations on the Diuretic Action of Adrenalin and the Active Principle of the Pituitary Gland. E. M. Houghton, Detroit.

Further Results in Suprarenal Transplantation. F. C. Busch, Buffalo.

The Nature and Cause of Edema. Martin H. Fischer, Livermore, Cal.

Some New Points in the Physiology of Lymph and Lymph Formation. A. J. Carlson, Chicago.

Multiple Hernias of the Cerebrum and Cerebellum Due to Intracranial Pressure (second communication). S. Burt Wolbach, Boston.

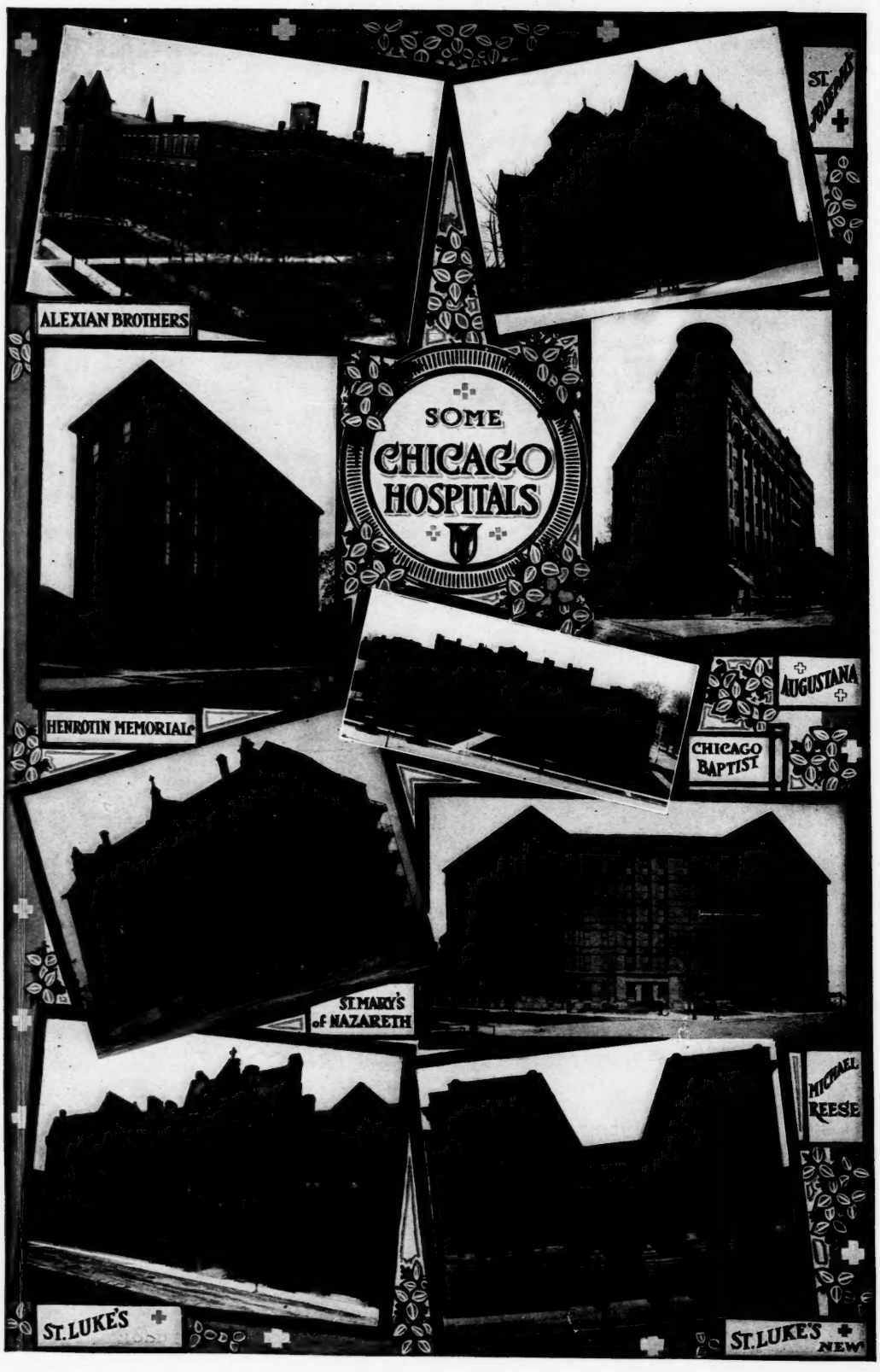
Joint Meeting with Scientific Section.

How Is the Activity of Phagocytes Affected by Electrolytes, by Non-Electrolytes and Changes in Osmotic Tension? Oliver Harry Brown, Mount Vernon, Mo.

Physio-Mechanical Causes of Pathologic Conditions. R. C. Falconer, Lexington, Ky.

Some Points on the Relation of the Intestinal Flora to Peptic Ulcer. Fenton B. Turck, Chicago.

Tubercle Bacilli in Sputum of Acute Colds, with Disappearance of Bacilli During Convalescence. L. Napoleon Boston, Philadelphia.


SOME
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HENROTIN MEMORIAL
AUGUSTANA
CHICAGO BAPTIST
ST. MARY'S of NAZARETH
MICHAEL REESE
ST. LUKE'S
ST. LUKE'S NEW

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

CHAIRMAN, WALTER B. DORSETT, ST. LOUIS; SECRETARY, W. P. MANTON, DETROIT.

Chairman's Address: Criminal Abortion in Its Broadest Sense. Walter B. Dorsett, St. Louis.

Three Procedures for Entering the Abdominal Cavity: the Vaginal, the Vertical Abdominal and the Pfannenstiel; the Indications for, and Their Relative Advantages and Disadvantages. E. E. Montgomery, Philadelphia.

The Preparation and After-treatment of Abdominal Section. Henry T. Byford, Chicago.

The Care of Patients After Abdominal Section, with Especial Reference to the Period of Time They Should be Kept Recumbent. C. C. Frederick, Buffalo.

A Study of the After Condition of Median Abdominal Wounds Healing Primarily, Which Were Closed in Layers by Absorbable Sutures; with Special Reference to the Strength of Union of the Fascia and the Uncertainty of the Staying Qualities of Ordinary Catgut. Le Roy Broun, New York.

Abdominal Cervical Cesarean Section. Johannes Pfannenstiel, Kiel, Germany.

Cesarean Section, with Report of Two Cases. J. M. Trigg, Shawnee, Okla.

Vaginal Cesarean Section and Its Place in Obstetric Surgery. Report of Five Cases. Reuben Peterson, Ann Arbor.

Some Experiences with Extrauterine Pregnancy and Report of Cases. H. E. Hayd, Buffalo.

Ruptured Tubal Pregnancy. When Shall We Operate? Hunter Robb, Cleveland.

Obstetric, Septic and Anesthetic Toxemias. H. G. Wetherill, Denver.

Diphtheritic Genital Infection Simulating Puerperal Fever. William Cuthbertson, Chicago.

Genital Tuberculosis. A. Martin, Griefswold, Germany.

The Development of Malignancy in Operation Wounds. I. S. Stone, Washington.

The Serum Treatment of Carcinoma. S. Strauss, New York.

Uterus and Stomach; Their Anatomic, Physiologic and Pathologic Relationship. Fred J. Taussig, St. Louis.

Fig. 7.—Michigan Avenue, looking north. 1, Auditorium Annex; 2, Auditorium Hotel; 3, Fine Arts Building; 4, Chicago Club; 5, Victoria Hotel; 6, Stratford Hotel; 7, Railway Exchange Building (the seventeen-story, light colored structure); 8, Orchestra Hall, built by popular subscription for the Theodore Thomas Orchestra; 9, the Montgomery Ward Building (with tower).

Acute Dilatation of the Stomach as a Postoperative Complication in Gynecologic Surgery. Lewis S. McMurtry, Louisville.

Bowel Complications Following Gynecologic and Obstetric Operations. Channing W. Barrett, Chicago.

The Expectant Treatment of Ureteral Calculus, Its Indications and Results. Charles Lester Leonard, Philadelphia.

The Treatment of Ureteral and Renal Pelvic Inflammation by Means of Antiseptic Injections. Edgar Garceau, Boston.

The Corset for Movable Kidney and Associated Visceral Ptoses. A. E. Gallant, New York.

The Suture; Its Place in Surgery. Henry O. Marcy, Boston.

The Female Perineum from a Physiologic Standpoint. J. Riddle Goffe, New York.

The Treatment of Uterine Fibromyomata Associated with Marked Anemia. Benjamin R. Schenck, Detroit.

The Conservative Surgeon and the Symptomless Uterine Fibroid. Thomas B. Eastman, Indianapolis.

The Non-surgical Treatment of Uterine Displacements. H. J. Boldt, New York.

The Advisability of Prompt Evacuation of the Uterus in the Treatment of Eclampsia. Henry D. Fry, Washington.

Report of a Case of Traumatic Rupture of the Uterus and Bladder During Labor at Full Term. Hysterectomy, Repair of Bladder, Recovery. John Young Brown and Percey H. Swahlan, St. Louis.

Abnormal Secretion from Mammary Glands in Non-pregnant Women. George Gellhorn, St. Louis.

The Menopause. Daniel H. Craig, Boston.

Ablatio Placentæ. (Premature Detachment of the Normally Situated Placenta.) Rudolph Wieser Holmes, Chicago.

Prolapse of the Rectum and Sigmoid Flexure Following Hysterectomy. L. J. Hirschman, Detroit.

The Adjustable Canvas Chair as an Aid in the Murphy Treatment of Diffuse Suppurative Peritonitis. D. Todd Gilliam, Columbus, Ohio.

SECTION ON OPHTHALMOLOGY.

CHAIRMAN, WILLIAM H. WILDER, CHICAGO; SECRETARY, ALBERT E. BULSON, JR., FORT WAYNE, IND.

Chairman's Address. William H. Wilder, Chicago.

Address by Special Invitation. Developmental Deformities of the Crystalline Lens. E. Treacher Collins, London, Eng.

A Further Contribution to the Possible Relationship of Autointoxication to Certain Diseases of the Cornea and Uveal Tract. (Special Investigation.) G. E. de Schweinitz and Charles A. Fife, Philadelphia.

The Eye as a Contributory Factor in Tuberculosis. F. P. Lewis, Buffalo.

The Calmette Ocular Reaction to Tuberculin. H. C. Parker, Indianapolis.

Ocular Complications of Pregnancy. (Special Investigation.) Hiram Woods, Baltimore.

The Relation of Ocular and Cardiovascular Disease. Melville Black, Denver.

Unilateral Voluntary Nystagmus, with Report of a Case. Walter L. Pyle, Philadelphia.

Zonular Opacity of the Cornea. F. C. Heath, Indianapolis.

Diffuse Interstitial Keratitis in Acquired Syphilis. A. E. Davis, New York City.

Opacification of the Cornea Following Cataract Extraction. Vard H. Hulen, San Francisco.

The Surgical Treatment of Orbital Complications in Disease of the Nasal Accessory Sinuses. Arnold Knapp, New York City.

An Infrequent Type of Optic Nerve Atrophy. H. F. Hansell, Philadelphia.

Some Clinical Aspects of Lenticular Astigmatism. Edgar S. Thomson, New York City.

A Study of One Hundred Refraction Cases in Indians Fresh from the Plains. Clarence Porter Jones, Newport News, Va.

The Association of Lens Opacity with Normal and Pathologic Blood Pressures. D. W. Greene, Dayton, Ohio.

The Treatment of Some Forms of Lens Displacement Other Than Those of Traumatic Origin. L. D. Brose, Evansville, Ind.

History of Iridotomy. Knife Needle vs. Scissors. Description of Author's V-Shaped Method. S. L. Ziegler, Philadelphia.

Miotics vs. Iridectomy in the Treatment of Simple Chronic Glaucoma. An Analytical Study of Sixty-five Cases Treated by Miotics Over a Series of Years. (Special Investigation.) W. C. Posey, Philadelphia.

A Better Prognosis in Penetrating Wounds of the Eyeball. J. A. Donovan, Butte, Mont.

The Treatment of Strictures of the Nasal Duct with Lead Styles. H. Moulton, Fort Smith, Ark.

Imperforation of the Lachrymonasal Duct in the Newborn and Its Clinical Manifestations. William Zentmeyer, Philadelphia.

Principles Underlying the Operative Treatment of Strabismus. (Special Investigation.) Edward Jackson, Denver.

Motais Operation for Ptosis. Henry Dickson Bruns, New Orleans.

The Treatment of Recurrent Pterygium. H. Gifford, Omaha.

The Relation of So-called Ophthalmic Migraine to Epilepsy. A. A. Hubbell, Buffalo.

Restoration of the Conjunctival Cul-de-Sac for the Insertion of an Artificial Eye. M. Wiener, St. Louis.

Palliative Operations for Choked Disc. William G. Spiller, Philadelphia.

Decompression Operations, with Especial Reference to Changes in the Eye Grounds. Harvey Cushing and James G. Bordley, Baltimore.

The Optic Nerve Changes in Multiple Sclerosis, with Remarks on the Causation of Non-toxic Retrobulbar Neuritis in General. Ward A. Holden, New York City.

Migraine: An Occupation Neurosis. G. L. Walton, Boston.

Differential Diagnosis of Affections of the Optic Nerve. Harry Friedenwald, Baltimore.

[The last five papers will be presented in the joint session with the Section on Nervous and Mental Diseases.]

A Contribution to the Study of Streptococcic Infections of the Adenoid in Adults. Alice G. Bryant, Boston.

Joint Session with Section on Surgery.

Intracranial Complications of Ear Disease. James F. McKernon, New York City.

Intracranial Complications of Nasal Disease. C. G. Coakley, New York City.

Symposium on Correction of Nasal Deformities,

John O. Roe, Rochester, N. Y.
Joseph C. Beck, Chicago.

Submucous Resection of the Lateral Nasal Wall in Chronic Empyema of the Antrum, Ethmoid and Sphenoid. R. Bishop Canfield, Ann Arbor, Mich.

A Study of the Sphenoidal Sinus. Joseph A. Gibson, Buffalo.

The Present Status of the Radical Operation for Empyema of the Sphenoid Sinus, with Demonstration of a New Instrument. Ross H. Skillern, Philadelphia.

The Treatment of Hypertrophic Rhinitis (Hay Fever), Especially with Reference to Injections with Alcohol. Otto G. Stein, Chicago.

Facio-Hypoglossal Anastomosis. George F. Cott, Buffalo, N. Y.

Ear Symptoms of Cardiovascular Disease. Louis F. Bishop, New York City.

Middle Ear Sclerosis, or Atrophic Middle Ear Catarrh. W. Sohier Bryant, New York City.

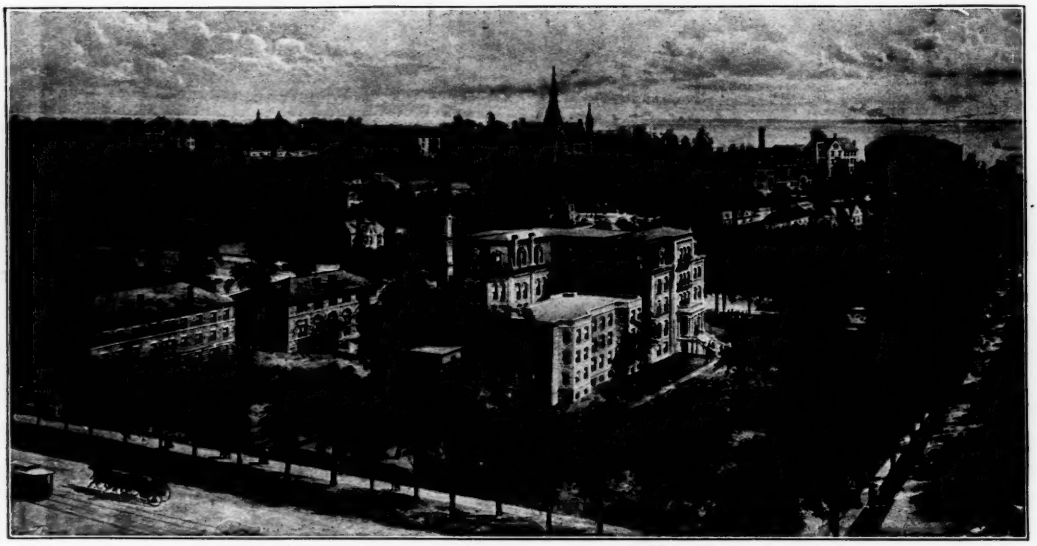


Fig. 8.—The liberal arts and theological departments of Northwestern University, with Lake Michigan on the eastern horizon. The building occupying the center of the photograph is a girls' dormitory, Willard Hall; to the northwest of it is the School of Music. Directly west of the latter is another dormitory for girls, Chapin Hall. The building in the background to the extreme left of the picture is Lunt Library; the next two buildings to the right are, in order, Memorial Hall and Heck Hall of the Garrett Biblical Institute. The building with the spires is University Hall, containing recitation halls and offices; closely contiguous to it (and appearing in the picture as part of it) is the School of Oratory. The structure, to the rear of which rises a smoke stack, is Science Hall, with the Old College lying to the east of it. The substantial building in the background on the extreme right is Fisk Hall, preparatory school. In the middle distance to the extreme right, and almost hidden by foliage, is another girls' dormitory, Pierson Hall. The professional departments are in the business center of Chicago and on the south side.

SECTION ON LARYNGOLOGY AND OTOLOGY.

CHAIRMAN, H. W. LOEB, ST. LOUIS; SECRETARY, W. SOHIER BRYANT, NEW YORK CITY.

Chairman's Address. H. W. Loeb, St. Louis.

Symposium. Differential Diagnosis of Luetic, Tuberculous and Malignant Diseases of the Larynx.

Histologic Diagnosis. D. Braden Kyle, Philadelphia.

Laryngoscopic Diagnosis. Chevalier Jackson, Pittsburg.

Systemic Tests. John W. Boyce, Pittsburg.

Laryngeal Manifestations Occurring in Locomotor Ataxia and Multiple Sclerosis. Wolff Freudenthal, New York City.

Tonsillectomy in Children Under Ether Anesthesia. A Hospital Operation. Edwin Pynchon, Chicago.

Laryngeal Manifestations Occurring in Locomotor Ataxia

Diagnosis of Functional Ear Disease. Hermann Stolte, Milwaukee, Wis.

Analgesia of the Nasal Mucous Membrane as a Prognosis in the Treatment of So-called Dry Catarrhal Deafness. Dunbar Roy, Atlanta, Ga.

Middle Ear Surgery. Philip Hammond, Boston.

Meato-Mastoid Operation for Chronic Mastoiditis. William L. Ballenger, Chicago.

Resection of the Labyrinth and Their Significance in the Diagnosis of Suppurative Labyrinthitis. George E. Davis, New York City.

A Case of Acute Mania Following Ligation of the Jugular for Otitic Symptoms. Eugene A. Crockett, Boston.

Session Devoted to Presentation of Specimens, Instruments, etc.

The following are to contribute to the anatomic and pathologic exhibit:

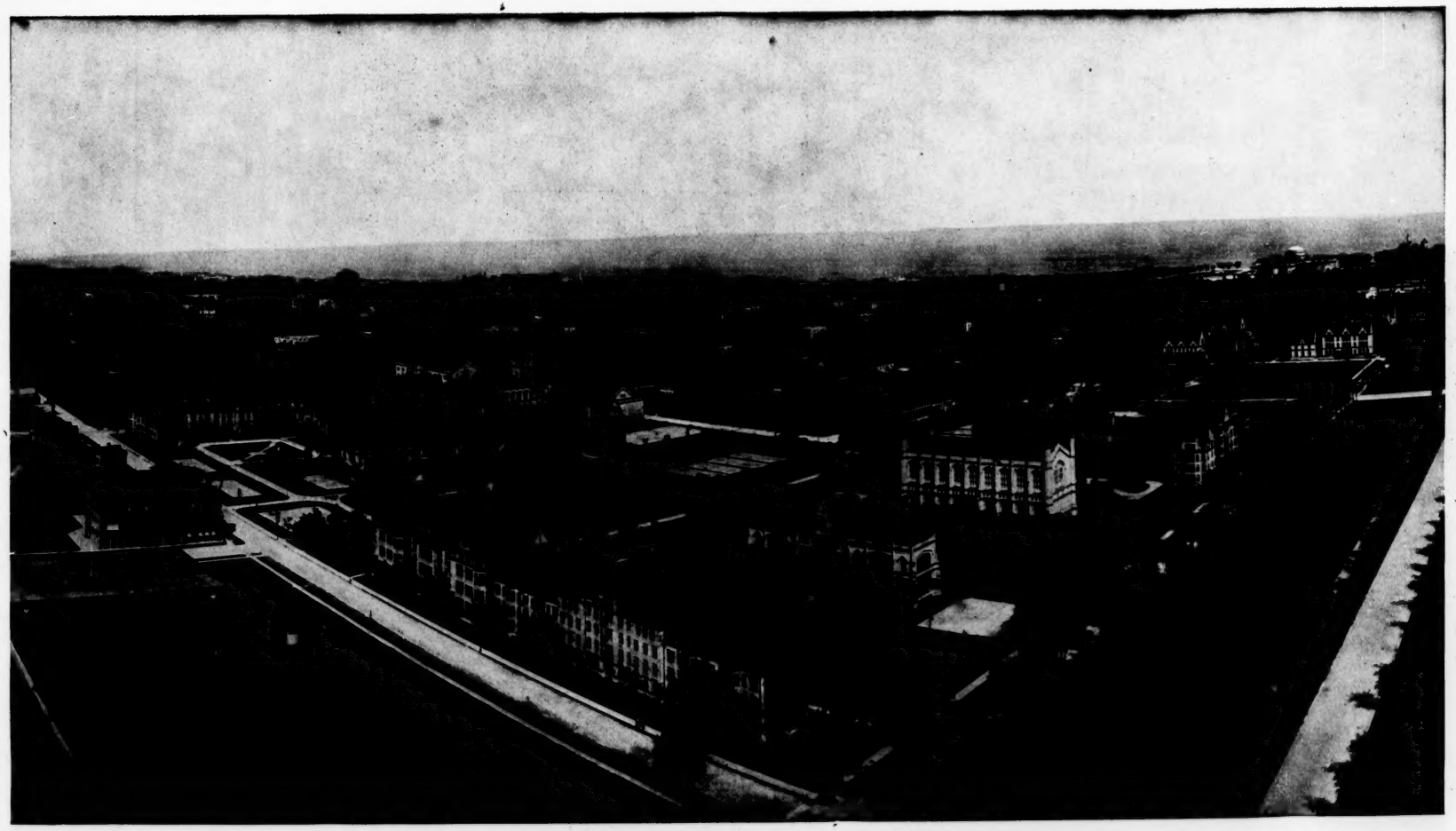


Fig. 9.—A general view of the University of Chicago and its surroundings. The photograph here reproduced was taken from a balloon as it floated over the Midway Plaisance, with the camera pointing northeast. Beginning in the foreground, the buildings lying at right angles to the street which stretches away to the right are: Men's Dormitory and Cobb Lecture Hall, then Haskell Museum, next the Law Building (Walker Geological Museum to the northeast of Law Building), next the Women's Residence Halls, and two blocks beyond, the Emmons Blaine Hall (School of Education) and the Manual Training Building. The Mitchell Tower in the middle distance, a little to the left of the center of the view, rises above Hutchinson Hall, the Reynolds Club and Mandel Assembly Hall. To the west are the Hull Biological Laboratories, and toward the foreground are seen the Kent Chemical Laboratory and the Ryerson Physical Laboratory. The large building north of the tower is the Bartlett Gymnasium, to the west of which lies the athletic ground, Marshall Field. The buildings on the corner south of the Field are Hitchcock and Snell Halls, dormitories for men. Other buildings of the professional departments are in the business center and the west side of Chicago.

The distance from the corner in the extreme foreground to the lake is about one mile. On the horizon is Lake Michigan on the shore of which in this view is Jackson Park. The domed building in the far distance on the extreme right is the Field Museum, which originally was the Fine Arts Building of the World's Columbian Exposition of 1893.

Frank Allport, Chicago. Some pathologic, microscopic and anatomic specimens from the special pathologic and anatomic laboratory of the Eye and Ear Department of the Northwestern University Medical School.

Emil Amberg, Detroit. Extended sinus thrombosis, complicating chronic suppurative otitis media with extradural and subdural and brain abscess. Operation, Autopsy. Specimens.

M. H. Cryer, Philadelphia. Specimens showing the variations of the frontal sinuses and their outlets. Variations in sphenoidal and maxillary sinuses. Demonstration of use of the spiral osteotome in craniotomy.

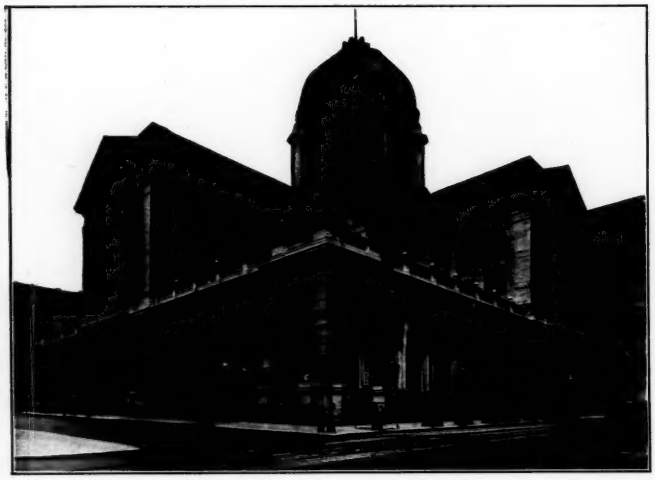


Fig. 10.—The Federal Building. This building occupies one block, being bounded by Jackson Boulevard, Clark, Adams and Dearborn Streets; it was erected at a cost of over four and one-half million dollars, and contains the main postoffice (there are fifty branch offices in the city), the subtreasury and various other government departments.

M. C. Findley, Grant's Pass, Ore.

Hal Foster, Kansas City, Mo. Specimen of large mixofibroma.

Otto T. Freer, Chicago. 1. Nasal septum showing a marked crest-shaped deflection following the superior border of the vomer. 2. Section of head showing outer wall of nasal fossa. 3. Pernasal forceps for the removal of adenoid vegetations through the nose.

H. Friedenwald, Baltimore. Two series of sections of the adult head.

J. Holinger, Chicago, Specimens.

Emil Mayer, New York City. Plates from Prof. Onodi's specimens.

Kaspar Pischel, San Francisco. 1. Demonstrations of method of using collodion as a dressing after nasal operations. 2. A tongue holder for tonsil operations under general anesthesia.

L. F. Page, Indianapolis. Specimens of carcinoma of the larynx.

A. E. Prince, Springfield, Ill. A simplified operation for frontal sinus obliteration.

G. E. Shambaugh, Chicago. Histologic preparations.

W. H. Steers, Brooklyn.

F. C. Todd, Minneapolis. Improved adenoid curette.

C. F. Welty, San Francisco. 1. Foreign body removed from larynx. 2. Tonsils removed in capsule. 3. Photographs.

SECTION ON HYGIENE AND SANITARY SCIENCE.

CHAIRMAN, COLONEL W. C. GORGAS, U. S. A., ANCON, PANAMA; SECRETARY, S. T. ARMSTRONG, NEW YORK.

Chairman's Address. Col. W. C. Gorgas, U. S. A., Ancon, Panama.

Measures to Prevent Malaria on the Isthmus of Panama. Henry R. Carter, U. S. P. H. & M.-H. S., Ancon, Panama.

Mosquito Work and Yellow Fever. J. H. White, U. S. P. H. & M.-H. S., New Orleans.

Mosquito Extermination in the Tropics. J. A. Le Prince, Ancon, Panama.

Tropical Sanitation. V. G. Heiser, U. S. P. H. & M.-H. S., Manila, P. I.

Symposium on the Necessity for Uniformity in Vital Statistics.

J. N. Hurty, Indianapolis.

E. J. Lutz, Kansas City, Kan.

M. O. Heckard, Chicago.

Prophylaxis and Management of Leprosy. L. E. Cofer, U. S. P. H. & M.-H. Service, Honolulu.

Municipal Sanitation. Charles V. Chapin, Providence, R. I.

Milk as a Carrier of Infection. John W. Trash, U. S. P. H. & M.-H. Service.

The Necessity of Obtaining Negative Cultures from All the Inmates Before Disinfecting a House for Diphtheria. Myer Solis-Cohen, Philadelphia.

The Ocular Tuberculin Reaction as a Means of Diagnosis and Control. Frank Smithies, Ann Arbor.

Early Diagnosis of Consumption as a Measure of Control. Especially the Relation of Tuberculin Thereto. W. A. Evans, Chicago.

The Control of Smallpox. H. M. Bracken, St. Paul.

The Responsibility of Municipalities in the Ohio Valley for the Epidemics of Typhoid Fever. W. Forest Dutton, Pittsburg.

Choleriform Diarrhea of Cold Weather—Winter Cholera. O. C. Breitenbach, Escanaba, Michigan.

Prophylaxis in Communicable Diseases. M. J. Rosenau, U. S. P. H. & M.-H. Service, Washington.

Examination to Establish Whether a Gonorrhea is Cured. F. C. Valentine, New York.

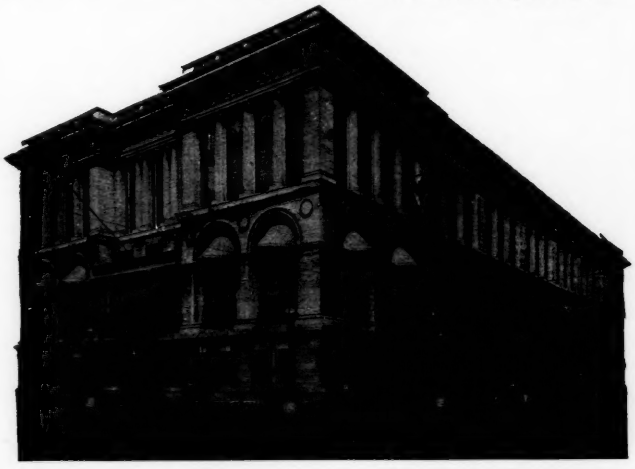


Fig. 11.—The Chicago Public Library, located at Michigan Avenue and Washington and Randolph Streets. The interior of this building is magnificently finished in marble and expensive mosaics. It contains over 300,000 volumes, and has an aggregate annual circulation of nearly three million volumes.

SECTION ON DISEASES OF CHILDREN.

CHAIRMAN, EDWIN E. GRAHAM, PHILADELPHIA; SECRETARY, SAMUEL J. WALKER, CHICAGO.

Chairman's Address: Infant Mortality. Edwin E. Graham, Philadelphia.

Hemorrhage of the Suprarenal Capsules in the Newly Born, with Report of Two Cases Due to Infection. Jennings C. Litzenberg and S. Marx White, Minneapolis.

Hemorrhages of the New-Born. Henry E. Tuley, Louisville.

Cerebellar Symptoms in Hydrocephalus, with a Pathologic Report of a Case Associated with Syringomyelia. John H. W. Rhein, Philadelphia.

Circulatory Disturbances in Diphtheria. John Howland, New York City.

The Spasmodic Disorders of the Respiratory Tract in Children. Charles G. Kerley, New York.

Chronologic and Anatomic Age. Thomas Morgan Rotch, Boston.

The Clinical Value of Blood Examination in Children. Louis Fischer, New York City.

A Study of the Anemias of Infancy. John Lovett Morse, Boston.

Opsonic Work in Children, with Special Reference to the Gonococcus. F. S. Churchill and A. C. Soper, Chicago.

The Vaccine and Serum Treatment of Gonorrhea in Female Children. William J. Butler and J. P. Long, Chicago.

Hydrotherapy in Scarlatina, with Special Reference to Tub Baths at Water Teperature of 90 F. for Relief of Nervous Symptoms in Early Stages of the Disease. D. S. Hanson, Cleveland, Ohio.

An Epidemic of Hemorrhagic Nephritis Following Scarlet Fever. C. F. Wahrer, Fort Madison, Iowa.

The Development of the Infantile Stomach. D. E. English, Mill Burn, N. J.

A Study of the Quantity and Quality of Breast Milk During the First Two Weeks of the Puerperium. Effa V. Davis, Chicago.

The Problem of Breast Feeding. J. Ross Snyder, Birmingham, Ala.

The Character of the Stools in Infancy as Related to the Intestinal Findings. J. H. Mason Knox, Jr., Baltimore.

Studies in Infantile Indigestion. Alfred Friedlander, Cincinnati.

A Summer Camp for Treatment of Sick Babies. Walter Graham Murphy, Hartford, Conn.

Adaptation of the Fresh Air Treatment of Tuberculosis to Pediatric Practice. Alexander McAlister, Camden, N. J.

The Ideal Intestinal Antiseptic in Diseases of Children. G. E. Robbins, Chillicothe, Ohio.

Hyperpyrexia in Children: Causes and Treatment. Philip Marvel, Atlantic City.

Paralytic Dementia in Childhood, with Report of a Case and the Brain Changes. Arthur W. Fairbanks, Boston.

A Consideration of Some Fallacious Standards Employed in Artificial Infant Feeding. Godfrey Roger Pisek, New York City.

Fig. 12.—The Freight Subway. This tunnel system, which is fifty feet below the surface of the city streets, is used to transport, by means of electric cars, freight and mail between the various railway freight depots and the large commercial houses. Over forty-five miles of this system are in operation, passing beneath the Chicago River at eleven points.

The Use of Whey in Infant Feeding. Henry L. K. Shaw, Albany, N. Y.

Present Status of Buttermilk in Infant Feeding. H. Lowenburg, Philadelphia.

Feeding of Fat. A. Jacobi, New York.

High Fat Percentages in Infant Feeding, Their Causes and Effects. Thomas S. Southworth, New York City.

The Prephysical Signs of Tuberculosis. W. C. Hollopeter, Philadelphia.

Rachitic Erosions of the Permanent Teeth Associated with Visual Defects. I. A. Abt, Chicago.

The Ambulatory Treatment of Pneumonia in Infants and Young Children. T. W. Kilmer, New York.

Curative Effect of Rest in Children, with Persistent Loss of Appetite. Irving M. Snow, Buffalo.

SECTION ON NERVOUS AND MENTAL DISEASES.

CHAIRMAN, T. H. WEISENBURG, PHILADELPHIA; SECRETARY, W. A. JONES, MINNEAPOLIS.

Chairman's Address. T. H. Weisenburg, Philadelphia.

Associated Movements. Charles E. Beevor, London, England. Discussion opened by Charles K. Mills, Philadelphia.

Epidemic Infantile Paralysis. M. Allen Starr, New York City.

Fig. 13.—Scene on the Chicago River. Since the completion of the Chicago Drainage Canal the current of this river has been reversed and its waters, instead of flowing to the Atlantic by way of the Great Lakes and the St. Lawrence, now empty into the Gulf of Mexico.

The Cortical Centers for Taste and Smell, Illustrated by the Study of a Case of Brain Tumor with Necropsy. Charles K. Mills, Philadelphia.

A Case of Cerebellar Tumor. Wharton Sinkler, Philadelphia.

Traumatic Cervical Myelomalacia. Report of a Case with Necropsy. Carl D. Camp, Ann Arbor, Mich.

Myotonia Atrophica. J. Ramsay Hunt, New York.

The Symptom-Complex of Central Neuritis. Isadore H. Coriat, Boston.

Significance of Pupillary Changes in Tabes. Edward D. Fisher, New York.

Cerebral Thrombosis, Venous and Arterial: A Clinical, Pathologic and Experimental Study. D. J. McCarthy and Milton K. Meyers, Philadelphia.

Disease of the Cerebral Vessels with Its Problems in Diagnosis. W. A. Jones, M.D., Minneapolis, Minn.

A Study of Certain Nutritional Phenomena of Hysteria. James J. Putnam, Boston.

Certain Affections in Children Commonly Classed as Hysteria. William N. Bullard, Boston.

A Study of Three Cases of Hysterical Ocular Phenomena Studied from the Standpoint of Dissociation. Sidney I. Schwab, St. Louis.

A Study of the Eye in Mental Defectives. L. Pierce Clark and Martin Cohen, New York.

Injuries of Cranial Nerves from Fractures of the Skull. John J. Thomas, Boston.

Cerebral Inhibition, as Illustrated in General Pathologic Conditions in the Nervous System. H. A. Tomlinson, St. Peter, Minn.

Hemorrhage into the Ventricles; Its Relation to Convulsions and Rigidity in Apoplectiform Hemiplegia. Alfred Reginald Allen, Philadelphia.

Experiments in Psycho-galvanic Reactions from Co-conscious (Subconscious) Ideas in a Case of Multiple Personality. Morton Prince, Boston, and Frederick Peterson, New York.

Elements of Psychiatric Prognosis. F. X. Dercum, Philadelphia.

Some Disorders of Attention and Their Treatment. Howell T. Pershing, Denver.

Pathologic Report of the Nervous System in a Case of Spondylose Rhizomelique. John H. W. Rhein, Philadelphia.

Traumatic Disfigurement, Depression, Suicidal Attempts, Delusions of Negation: Bronchiectatic Abscesses of Lungs, Abscesses of Brain, Chronic Meningitis. E. E. Southard and J. B. Ayer, Jr., Boston.

Cerebral Rheumatism. Herman H. Hoppe, Cincinnati.

Two Cases of Multiple Neuritis. Philip Zenner, Cincinnati.
The Attitude of Neurologists Toward Electrotherapy. Frank R. Fry, St. Louis.
The Respiratory Signs of Chorea Minor. William W. Graves, St. Louis.
Insanities Caused by Acute and Chronic Intoxications with Opium and Cocain; a Study of 171 Cases. Alfred Gordon, Philadelphia.
The Wild Duck. A Study in Psychopathology. Smith Ely Jelliffe, New York.
Psychotherapy. M. A. Bliss, St. Louis.

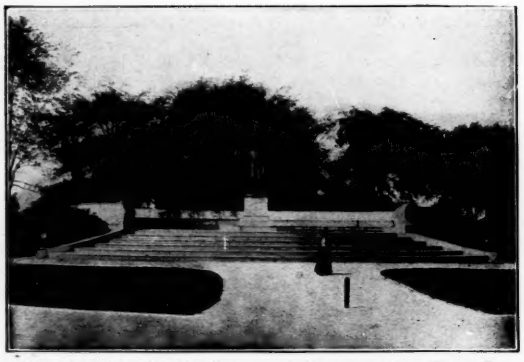


Fig. 14.—The Lincoln Statue and its approach. This statue, the work of St. Gaudens, and one of his most noted pieces, stands at the south entrance to Lincoln Park.

Neuromuscular Co-ordinations Having Educational Value. Luther H. Gulick, New York.
The Use of Physical Measures in the Therapeutics of the Nervous System. William Benham Snow, New York.
Röntgeneology in Neurology. Mihran K. Kassabian, Philadelphia.

Joint Session with Section on Ophthalmology.

Palliative Operations for Choked Discs. William G. Spiller, Philadelphia, and Harvey Cushing, Baltimore.

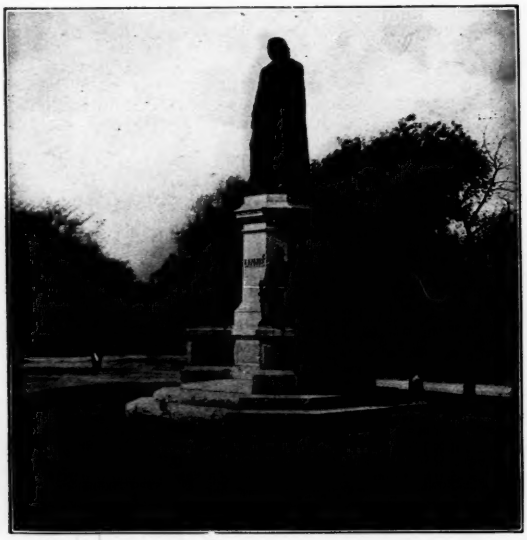


Fig. 15.—The Linné Statue, another of the numerous pieces of statuary to be found in Lincoln Park.

Optic Nerve Changes in Multiple Sclerosis. Ward A. Holden, New York City.
Migraine—an Occupation Neurosis. George L. Walton, Boston.
Differential Diagnosis of Morbid Conditions of the Optic Nerve. Harry Friedenwald, Baltimore.
An Infrequent Type of Optic Nerve Atrophy. H. F. Hansell, Phila.
The Relation of So-called Ophthalmic Migrains to Epilepsy. A. A. Hubbell, Buffalo.

SECTION ON STOMATOLOGY.

CHAIRMAN, E. A. BOGUE, NEW YORK; SECRETARY, EUGENE S. TALBOT, CHICAGO.

Chairman's Address. E. A. Bogue, New York.
Dental Education. M. L. Rhein, New York.
Pathology as Taught in Dental Schools. L. G. Noel, Nashville, Tenn.
State Reciprocity in Dental Practice Licensing. Adelbert H. Peck, Chicago.
Some Practical Considerations Concerning Inflammation. James E. Power, Providence, R. I.
Interstitial Gingivitis. Edward C. Briggs, Boston.
Prophylaxis of the Mouth. M. H. Fletcher, Cincinnati.
Etiology of Face, Nose, Jaw and Tooth Deformities. Eugene S. Talbot, Chicago.
Bone Pathology of Tooth Movement. Eugene S. Talbot, Chicago.
The Influence on the Nose by Widening the Palatal Arch. Lee Wallace Dean, Iowa City.
The Relation between Deviation of the Nasal Septum and Dental and Jaw Deformities from the Rhinologist's Standpoint. Nelson M. Black, Milwaukee.
Diagnostic Value of Microscopical Examinations During Operations on Pathological Tissue. Vida A. Latham, Chicago.
The Surgery of Harelip and Cleft Palate. George V. I. Brown, Milwaukee.

Fig. 16.—Group commemorating the Fort Dearborn Massacre. This stands at Calumet Avenue and Eighteenth Street, near the famous massacre tree.

Tumors Involving the Alveolar Process. Stewart L. McCurdy, Pittsburg.
Some of the Diseases of the Salivary Glands and Their Ducts. Thomas L. Gilmer, Chicago.
Treatment of Mandibular Fractures. Robert T. Oliver, West Point, N. Y.
Peripheral Causes of Facial Pains, Including Tic Douloureux. Morris I. Schamoerg, New York.
Nitrous Oxid and Oxygen Anesthesia in Dental and General Surgery. Fred K. Ream, Chicago.

[All dentists are cordially invited to attend the meetings.]

SECTION ON CUTANEOUS MEDICINE AND SURGERY.

CHAIRMAN, M. B. HARTZELL, PHILADELPHIA; SECRETARY, M. L. HEIDINGSFELD, CINCINNATI.

TUESDAY, JUNE 2—2 P. M.

Chairman's Address: The Nature and Causes of Eczema. M. B. Hartzell, Philadelphia.
Nutritive and Neurotic Disturbances of the Hair. L. D. Bulkley and H. H. Janeway, New York City.
A Deceptive Case of Leprosy. Charles J. White and O. Richardson, Boston.
X-Ray Uses, Dangers and Abuses. W. S. Gottheil, New York City.

The Treatment of Epithelioma by the Roentgen Rays. G. E. Pfahler, Philadelphia.
Increasing Tendency to Recognize a Systemic Etiology and Systemic Treatment of Skin Disease. The Old and New in Cutaneous Therapy. Ludwig Weiss, New York City.

WEDNESDAY, JUNE 3—2 P. M.

Lantern Session.

Pemphigus, a Study of Some Cases Personally Observed. J. M. Winfield, Brooklyn.
Pemphigus Foliaceous and Its Status Among the Bullous Dermatoses. W. T. Corlett, Cleveland.
The Pathology of Pemphigus Foliaceous. Oscar T. Schultz, Cleveland.
A Case of Acnitis (Barthélemy), or Acne Agminata (Crocker). J. F. Schamberg, Philadelphia.
Some Unusual Forms of Epithelioma of the Skin. J. A. Fordyce, New York City.
A Further Contribution to the Histopathology of Epidermolysis Bullosa. M. F. Engman and M. H. Hook, St. Louis.
Paraffin Prosthesis. A Further Contribution on Its Histopathology. M. L. Heidingsfeld, Cincinnati.
Multiple Hemorrhage Sarcoma (Kaposi). David Lieberthal, Chicago.

THURSDAY, JUNE 4—2 P. M.

Exhibition of Clinical Cases. Joseph Zeisler, Chicago.
The Pigmentations of the Mucous Membrane of the Mouth. H. G. Anthony, Chicago.
Erythema Figurata Perstans. Grover W. Wende, Buffalo.
Cheilitis Exfoliativa. M. L. Ravitch, Louisville, Ky.

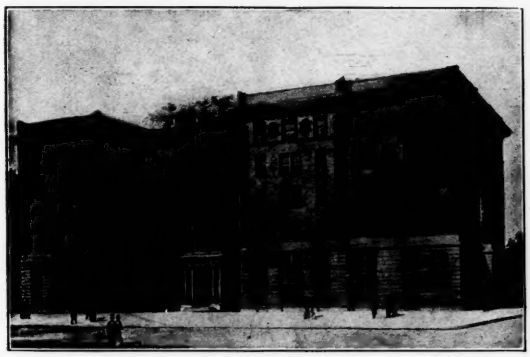


Fig. 17.—Wesley Hospital, which is contiguous to, and connected with Northwestern University Medical School.

Mercurial Treatment for Late Manifestations of Syphilis. Herman G. Klotz, New York City.
The Influence of the Discovery of the Pale Spirochete on the Treatment of Syphilis. W. F. Breakey, Ann Arbor.
The Relation of the Character of the Syphilitic Initial Lesion to the Secondary Constitutional Period. A. Ravogli, Cincinnati.

SECTION ON PHARMACOLOGY AND THERAPEUTICS.

CHAIRMAN, M. H. FUSSELL, PHILADELPHIA; SECRETARY, C. S. N. HALLBERG, CHICAGO.

Chairman's Address: Simplicity in Prescribing. M. H. Fussell, Philadelphia.
Address of Chairman of Delegation from American Pharmaceutical Association. Joseph P. Remington, Philadelphia.
Report of Secretary. C. S. N. Hallberg, Chicago.
Trend of Pharmacology and Therapeutics in Relation to Chemical Research. W. J. K. Kline, Greensburg, Pa.
Osteopathic versus Drug Treatment. M. Clayton Thrush, Phila.
Work Cure. Addison Thayer, Portland, Me.
Physiologic Assay of Some Commonly Used Drugs. Charles W. Edmunds, Ann Arbor, Mich.
Sodium Cacodylate: Its Therapeutic Uses. Frank Billings, Chicago.
Arsenic in the Treatment of Diseases of the Skin. Milton B. Hartzell, Philadelphia.
The Specific Chemical Therapy of Trypanosomiases and Spirilloses. Benjamin T. Terry, New York.
Organotherapy. Reid Hunt, Washington, D. C.
General and Topical Applications in Advanced Laryngeal Tuberculosis. J. Solis-Cohen, Philadelphia.
Pneumotherapy in Pulmonary Tuberculosis. S. Solis-Cohen, Philadelphia.
The Use of Digitalis in Pneumonia. Thos. F. Reilly, New York.
The Effects of Quebracho on the Respiration. H. C. Wood, Jr., Philadelphia.
Tincture Strophanthus and Strophanthin, with Especial Reference to Dosage. R. A. Hatcher, New York.

Joint Session with the Section on Hygiene and Sanitary Science.

Prophylaxis of Communicable Diseases:
From the Viewpoint of the Practitioner. David Edsall, Philadelphia.

Fig. 18.—Mercy Hospital, also connected with Northwestern University Medical School. A handsome new addition to the hospital is in course of construction, which, when completed, will add much to the usefulness of the institution.

From the Viewpoint of the Health Officer: Herman Biggs, New York.
From the Viewpoint of the Hygienist. M. J. Rosenau, Washington, D. C.
The Pharmacopeia as the Standard for Medical Prescribing. A. Torald Sollmann, Cleveland.

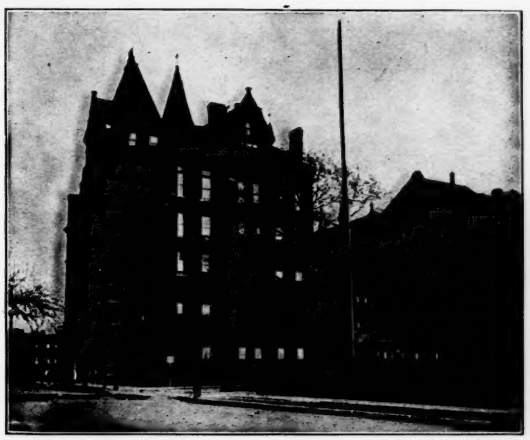


Fig. 19.—The Presbyterian Hospital, located at West Congress and Wood Streets, connected with Rush Medical College.

The Need of a More Intimate Knowledge of U. S. Pharmacopeia and National Formulary. James M. Anders, Phila.
The Pharmacopeia as a Legal Standard. H. W. Wiley, Washington, D. C.
The Sufficiency of the Official Drugs and Preparations in the Medicinal Treatment of Disease. Oliver T. Osborne, New Haven, Conn.
Responsibility of the Medical Profession for the Use of Nostrums. C. F. Wahrer, Fort Madison, Iowa.
Pharmacology of Isopral. Torald Sollmann, Cleveland, Ohio.

CHICAGO

A BRIEF DESCRIPTION OF CHICAGO AND ITS POINTS OF INTEREST.

ROBERT T. GILLMORE, M.D.
Secretary Chicago Medical Society.

The future of Chicago, which now has a population of over 2,200,000, was prophesied by La Salle in 1671, when he stated that "this is the lowest point on the divide between the two great valleys of the St. Lawrence and the Mississippi. The boundless regions of all the West must send their products to the East through this point. Everything invites action. The typical man who will grow up here must be an enterprising man. This will be the gate of empire, this the seat of commerce." It has fulfilled its destiny in outranking in rapidity of growth any other city in the United States.

This territory was first invaded in 1673 by the French traders, who recognized its geographical advantages as a distributing center. The beginning of a continuous settlement dates back to 1777, when an Indian trader, Jean Baptiste, a native of San Domingo, built a house on the north bank of the Chicago River. In 1803 this house was sold to John Kinzie, who was the first American settler. The following year Fort Dearborn was built on the south bank of the Chicago River, at a point now the site of William Hoyt's wholesale grocery store, at the foot of River Street. The occupants of the fort, as they were retreating along the shores of Lake Michigan, were massacred by the Indians. A bronze monument marks the spot at Eighteenth Street and the Lake Front, having been erected near the famous massacre tree. This monument, designed by Carl Rohl Smith, was presented to the city by George M. Pullman on June 22, 1893.

In 1830 Chicago was a hamlet of log houses with about 100 people, and was incorporated as a city in 1837, with a population of 4,000 and an area of 2½ square miles. The great fire occurred Oct. 8, 1871, devastating 3¼ square miles of the business and residence districts and destroying property to the extent of $187,000,000. With the characteristic energy of the Middle West and the assistance of this country and Europe, it was speedily restored.

MEETING PLACES.

The First Regiment Armory, situated at the corner of Sixteenth Street and Michigan Avenue, will contain the scientific and commercial exhibits, the place of registration, postoffice and bureau of information. It is convenient to all the large hotels and the chairman of the committee on hotels will have a representative at headquarters to direct those who have not previously made reservations. The twelve sections will be housed in quiet, suitable quarters, extending as far south as Twenty-second Street and along Michigan Avenue and the Lake Front as far north as Congress Street, all within a short distance of the headquarters of the Association.

At the Coliseum, located on the south side on Wabash Avenue between Fourteenth and Sixteenth Streets, two blocks from the First Regiment Armory, will be held the President's reception and ball and the musical program. The area of the building is two acres, with a seating capacity of 15,000. It will be the scene of the National Republican Convention, which meets June 14, 1908.

CHICAGO AS A MEDICAL CENTER.

The Memorial Institute for Infectious Diseases, located at 762 West Harrison Street, was founded in 1902, for the purpose of original research in acute infectious diseases and for the advancement of scientific medicine. It publishes an endowed medical journal and in addition supports ten independent investigators.

Chicago has a number of medical schools; the three largest are Rush Medical College, Northwestern University Medical School and the College of Physicians and Surgeons. Rush Medical College is affiliated with the University of Chicago and its department of medicine is situated on the corner of Harrison and Wood Streets, and can be conveniently reached by the Metropolitan Elevated Railroad or by the Harrison Street electric car line. Rush Medical College is one of the oldest institutions of the Northwest, having been founded by Daniel Brainerd in 1837.

The Northwestern University Medical School became affiliated with the Northwestern University at Evanston in 1870. It is located at Twenty-fourth and Dearborn Streets, and can be reached by the South Side Elevated Railroad, and also by the State Street electric car line. Established in 1859 as the Lind University by Dr. Hosmer A. Johnson and reorganized in 1864 as the Chicago Medical College, it was one of the first schools to inaugurate a graded course in medical instruction.

The College of Physicians and Surgeons, located at West Harrison Street, across from the County Hospital, is the medical department of the University of Illinois, located at Ur-

Fig. 20.—Cook County Hospital. This hospital, the largest in the state, is located on a twelve-acre site at Harrison and Wood streets. Its present capacity is over 1,200 beds, and during the past fiscal year over 26,000 patients were admitted. The attending staff is selected by competitive examination irrespective of school of practice; the house staff consists of 48 internes, selected by competitive examination. The hospital is under the direction of the Board of County Commissioners.

bana, Ill. It was founded in 1882 by a group of physicians, at the head of which was A. Reeves Jackson.

The Postgraduate Medical School was founded in 1888. Its hospital contains 65 beds, and with the other hospitals affiliated with it the staff has at its command 400 beds. The teaching is almost exclusively clinical, in conjunction with laboratory, chemical, pathologic, anatomic and experimental work on animals. The Illinois Postgraduate Medical School is another institution doing advanced work. It is situated in the "medical center" at 819 West Harrison Street, and has a diversified schedule of medical and surgical clinics. The Chicago Policlinic was founded by Dr. Truman W. Miller in 1886. It is located at 174 Chicago Avenue, and also gives advanced courses in medicine to practitioners, and is the pioneer

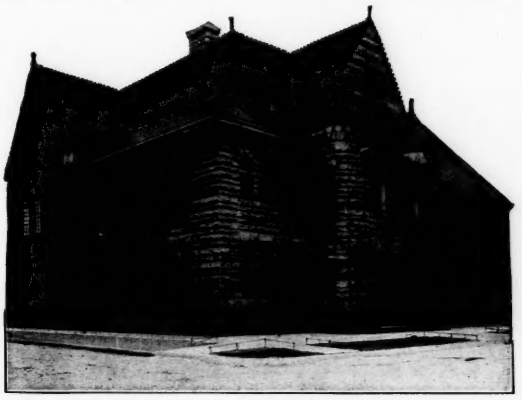


Fig. 21.—The Chicago Historical Society's Building, located at the corner of Dearborn Avenue and Ontario Street. This substantial structure is a repository of matter relating to the history of Chicago and the Northwest. In addition to numerous interesting historical relics, it contains over 40,000 volumes.

postgraduate school of the West. The members of the staff of the Policlinic are affiliated with nearly every other hospital in the city and the students are admitted to their several clinics.

Of the many other medical colleges in the city several do high grade and creditable work. Others, unfortunately, are colleges of which Chicago has little cause to be proud.

THE HOSPITALS OF CHICAGO.

Chicago is well equipped with modern hospitals, some eighty in number, some of the larger of which are affiliated with medical schools, and the clinical material is available for teaching purposes.

Cook County Hospital was established in 1866 and occupies a site of 12 acres on the corner of Harrison and Wood Streets. The general design of the present building was adopted by the Board of Commissioners in 1875. Since then additions have been built from time to time, the last building erected being the hospital for tuberculosis, which was completed in 1906. Cook County Hospital contains about 1,240 beds, and during the last fiscal year 26,118 patients were admitted. The hospital is under the direction of the Board of County Commissioners and the attending staff is selected by competitive examination, held by the Civil Service Commission of Cook County, Illinois, irrespective of the school of practice. The house staff consists of forty-eight internes, appointed for eighteen months by competitive examination held by the attending staff and under the control of the Cook County Civil Service Commission.

The Illinois Charitable Eye and Ear Infirmary is located at the corner of Adams and Peoria Streets. It was founded in May, 1858, by a number of physicians under the leadership of the late Dr. E. L. Holmes, and was known at that time as the Chicago Charitable Eye and Ear Infirmary. The object of this institution is to furnish medical and surgical treatment to eye and ear patients who are indigent residents of the State of Illinois. The infirmary can accommodate about 200 house patients and about 12,000 out-patients are treated annually.

CHICAGO AS AN EDUCATIONAL CENTER.

Among the institutions representing higher education are the Chicago University, Northwestern University, Lewis Institute and Armour Institute.

The University of Chicago was founded July 1, 1891, by John D. Rockefeller. The first president was the late William Rainey Harper, and he was succeeded by the present incumbent, Harry Pratt Judson. The institution occupies a campus about 95 acres in extent, exclusive of the observatory at Lake Geneva, Wis. The faculty numbers 350. In addition to the work of the colleges corresponding to the usual American four-year course, there are special courses offered in affiliation with Rush Medical College, the Divinity School, the Ogden Graduate School of Science and the Graduate Schools of Arts and Literature. The published results of research done by students and instructors is recognized among scientists as of great value. This university attempts also to bring its opportunities to non-resident students through the lecture and correspondence study departments of the University Extension Division.

Northwestern University was founded in 1851, and is presided over by Abram Winegardner Harris. The College of Liberal Arts, the School of Engineering, the School of Music, the School of Oratory, the Evanston Academy and Garrett Biblical Institute are located on the lake shore at Evanston. In the University Building at Lake and Dearborn Streets, Chicago, are the Schools of Law, Pharmacy and Dentistry. The Medical School, previously mentioned, is at Twenty-fourth and Dearborn Streets. The university proper, although 12 miles north of Chicago, is but twenty minutes' distant by the Chicago and Northwestern Railway. The campus is said to be one of the most beautiful in America. The clinics of the Dental School are among the largest in the world; the Gary Collection of the Law Library is unequaled; the laboratories of the Pharmacy School are exceptional. The medical school is distinctive for its clinical facilities and affiliated hospitals.

The John Crerar Library was founded in 1894 and is temporarily located on the sixth floor of the Marshall Field Building, at the northwest corner of Wabash Avenue and Washington Street. Owing to its central location it is especially valuable to the medical profession for research work. The library has at present 215,144 volumes, of which 46,260 are medical, including the famous Senn Collection of 10,689 volumes and 14,501 pamphlets. A fund of $1,000,000 has been set aside to construct a suitable home for the library.

The Newberry Library is located on the north side at Walton Place, between Clark Street and Dearborn Avenue. It is the site of the famous Ogden house, which was the only house in that district not destroyed by the great fire of 1871.

Fig. 22.—The Art Institute on the Lake Front at the foot of Adams Street. It is the property of the city and contains many masterpieces of art, both modern and classical. It is open free to the public on Wednesdays, Saturdays and Sundays.

The cost of the building was about $500,000, and the library contains 192,440 volumes and 44,542 pamphlets.

The Chicago Public Library, located at Michigan Avenue and Washington and Randolph Streets, occupies a fireproof building three stories in height, which was erected in 1897 at a cost of $2,000,000. The style of architecture is Grecian and the exterior is of Bedford limestone. The interior decoration of the building compares favorably with that of any of the European buildings. The main staircase to the delivery room is decorated with Carrara marble, and the delivery room itself is surmounted by a very beautiful

stained-glass dome. The library contains about 310,000 books, and in addition to the central library it has a system of forty branch distributing stations, and also conducts a number of branch libraries in different parts of the city, one of which is the famous T. B. Blackstone Memorial Branch Library, located at Lake Avenue and Forty-ninth Street.

The Chicago Historical Society, whose building is at the corner of Ontario Street and Dearborn Avenue, was founded in 1876 for the purpose of collecting and preserving materials of history and to spread historical information, especially concerning the northwestern states. The library contains many valuable manuscripts of the time of the Continental Congress and Constitutional Convention and papers relating to the French régime by La Salle, Joliet and Allouez, and early writings of settlers and explorers of the Middle West.

The Field Columbian Museum is an outcome of the World's Fair of 1893. It is picturesquely located on the banks of a lagoon in Jackson Park in the old Fine Arts Building of the exposition. It contains many valuable exhibits, especially in geology, anthropology, botany and zoology. It contains a library of 50,000 volumes and a herbarium of 260,000 sheets. It is open without charge for admission on Saturdays and Sundays, and can be reached by the Illinois Central Railroad, the Fifty-fifth Street branch of the Cottage Grove Avenue line or the South Side Elevated.

PLACES OF INTEREST.

The Art Institute of Chicago was established in 1879, and occupies a handsome building on the Lake Front opposite Adams Street. It is built of Bedford limestone in the Italian Renaissance style, at a cost of $648,000. In it are many valuable works of art donated by citizens of Chicago, among which are some by Rembrandt, Rubens, Van Dyck, Holbein, Hobbima, Teniers and many others, besides numerous modern works by foreign artists. It has some creditable originals in marble as well as many reproductions of famous pieces of statuary. The Ryerson Library, which has 3,500 volumes devoted to the subject of art, is to be found here. One of the interesting features of the institute is a large art school, which is attended by 4,000 students annually. Its curriculum includes drawing, painting, sculpturing, newspaper illustrating and decorative designing, under a corps of 60 instructors and teachers. The Art Institute will be open free to the members of the American Medical Association during the week of their meeting in June. On Thursday, June 4, a reception is to be given from 2 to 5, to which the members of the Association are cordially invited.

Chicago has the finest boulevard and park system in the world, made up of three divisions—the South Park, Lincoln Park and West Side systems. The boulevard system is 75 miles in length. The South Park system begins at the river and extends south on Michigan Avenue, to Grand Boulevard, where it terminates at Fifty-first Street in Washington Park. At this entrance to the park stands the Washington Equestrian Statue, which is a replica of one erected in Paris by the Daughters of the American Revolution. Washington Park is a part of the South Park system, and contains a conservatory. Besides the great extent of fine lawns, it has in the eastern part some exterior landscape gardening which is well worth seeing.

Passing from Washington Park east along the Midway Plaisance toward the lake, we find Jackson Park, which covers an area of over 500 acres, and was the site of the World's Fair of 1893. At the southeast corner of the park there is the yachting harbor of the Jackson Park Yacht Club, and varieties of pleasure boats are to be seen there. In this same harbor are the reproductions of the three caravels in which Columbus made his famous voyage of discovery to America, and near the harbor is the reproduction of the Convent La Rabida of Spain, at which Columbus was received by Queen Isabella before starting on his voyage. This building is used during the summer months as a sanitarium for sick babies.

The Lincoln Park system begins at the foot of Rush Street, the Lake Shore drive leading directly to this park. Lincoln Park is noted for its zoological gardens, in which may be found a very creditable menagerie. The horticultural display and the building of the Academy of Science are the other interesting features, as well as the monuments, among which is the famous Lincoln Statue by St. Gaudens. There is an open-air sanitarium for sick babies in this park. It is only open during the day, however; mothers must take their babies home at night.

Fig. 23.—The Venetian Building (on the extreme left), the Columbus Memorial Building and (on the right) the Reliance Building. In these three office buildings located, respectively, on the southeast and southwest corners of State and Washington streets, in the heart of the down-town district, nearly 800 physicians have their offices.

Going west from Washington park, Garfield Boulevard leads directly to the West Side parks, among which are McKinley, Humboldt, Douglas and Garfield. In McKinley Park stands the McKinley monument, in bronze, designed by Charles Mulligan of Chicago, and erected in 1903.

All the parks connected with the Boulevard system are the playgrounds of the people, and in the summer time the park commissioners provide band concerts, tennis courts, golf links and baseball grounds, besides the lagoons in the various parks which are utilized for boating. During the winter months skating and tobogganing furnish amusement.

Chicago has twenty first-class theaters, most of which are in the down-town district. It has also four amusement parks which are open during the summer months: White City and Sans Souci on the south side, Riverview and Ravinia on the north side.

The Chicago Sanitary and Drainage Canal extends from Chicago to Lockport, Ill., a distance of 28 miles, and is 220 feet wide and 30 feet deep. It is no exaggeration to say that this is one of the greatest artificial waterways ever constructed, its cost being $56,000,000. Some idea of the magnitude of this project may be realized when one considers that the excavated material, if deposited in Lake Michigan in 40 feet of

water, would make an island one mile square 12 feet above the water line. The main object of the canal is to improve the water supply of Chicago. The canal also furnishes one of the largest power plants in the country, capable of a development of 40,000 horse-power. It is in operation and furnishes light to the city as well as heat and power to factories which are located along its banks.

The Chicago freight subway is a tunnel 50 feet below the surface of the ground, 14 feet wide and 12 feet high. The dirt excavated in making it was transported to the Lake Front, where it was utilized in filling in the lake shore and making the site for a new park. The subway is, in fact, a miniature underground city with electric car service. The transportation of freight and mail from the various railways, depots and the larger stores has been greatly facilitated by its use. The tunnel is also used for the conduits of an automatic telephone system as well as for telegraph and electric wires.

Fig. 24.—The State Street Bascule Bridge. This is one of the numerous links connecting the north and the south sides.

The Illinois Steel Company's plant, located at South Chicago, is one of the largest steel mills in the world, employing about 12,000 men. The value of the plant is roughly estimated at $200,000,000. The raw material is transported from the mines by specially constructed steamers 600 feet long, built and owned by the company. The blast furnaces are working night and day, and every night the southern sky line of Chicago is illuminated by the reflection from the plant. The management has extended to all the members of the Association a cordial invitation to visit the steel mills, where a guide will be furnished. Visitors will be directed by the information bureau as to the best way to reach South Chicago.

HULL HOUSE.

The complexities of city life have necessitated the founding of social settlements of which Hull House is an example. Hull House was established in September, 1889, in a cosmopolitan quarter of Chicago. It is situated on the west side, at the corner of Polk and Halsted Streets, and is easily reached by the Halsted Street cars. The Halsted Street station of the Metropolitan Elevated is two blocks to the north. The public are invited to visit the house on Saturday, but special arrangements may be made by mail or telephone to have visitors admitted on other days. Nine thousand people come to the house each week during the winter months, as members of a club or a class or as parts of an audience, or in search of help of various kinds. The institution, which is open to the public, includes reception rooms, class and club rooms, a music school building, a studio, a theater, a gymnasium, a woman's club building, a museum and a boys' club. The last two are of special interest to strangers.

The Chicago River, which divides the city into the north, south and west sides, while it has increased the shipping facilities of the city, has at the same time presented one of the most difficult propositions in the way of traffic from one side of the city to the other. In an effort to solve this difficulty a number of bridges have been devised, of the bascule and swing types, as well as a unique lift bridge at Halsted Street.

THE STOCK YARDS.

The Union Stock Yards, established in 1864, are located between Thirty-ninth and Forty-seventh Streets, running east and west from Halsted Street to Center Avenue, covering in all an area of 640 acres. These yards, known among stockmen as the world's greatest live-stock market, have their entrance at Forty-first and Halsted Streets, and may be reached by the South Side Elevated Railroad or by the State Street electric car line by transferring on Firty-first or Forty-third Street.

Chicago's supremacy in the live-stock industry is demonstrated by the fact that its live-stock receipts are more than half of all the markets in America, or 60 per cent. of the total live-stock receipts of the country. The total annual receipts of all kinds of stock in 1907 were 15,240,000 and the valuation $319,202,239. This is largely due to the fact that Chicago is a natural trade center, and the facilities for transportation are unexcelled, there being thirty-five trunk lines entering the city, with a mileage of 100,000. In addition to this might be mentioned the advantages of shipping on the Great Lakes and canals contiguous to Chicago. Besides the export meat business, Chicago consumes 600,000 head of stock annually.

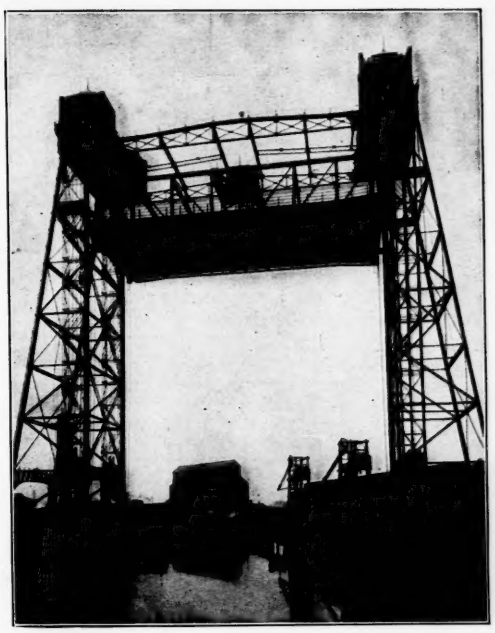


Fig. 25.—Halsted Street Bridge. In this unique structure the driveway is lifted ninety feet above the water level.

In the stock yards are located the finest slaughtering houses in the world. Among some of the representative companies are Armour & Co., Swift & Co., and Libby, McNeill & Libby. To insure the wholesomeness of the meat, there are official inspectors under the supervision of the government, the Illinois

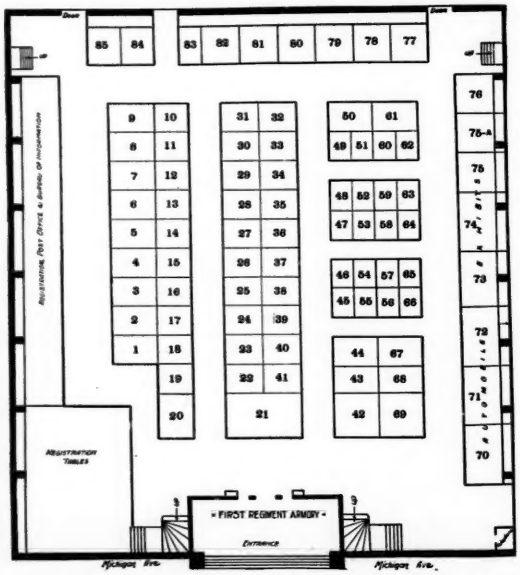
State Board of Live Stock Commissioners and the City Health Department. The government, under Dr. Bennett, chief inspector of the United States Board of Animal Industry, has a system of inspection to control meat that is intended for interstate commerce and export. Illinois is protected by the State Board of Live Stock Commissioners and Chicago by the Health Department. Under the government's system of inspection, all meat that comes in on the hoof is examined before killing, and before meat can be shipped it must bear the government certificate or stamp.

A cordial invitation is extended by Armour & Co., Swift & Co., and Libby, McNeill & Libby, to members of the American Medical Association and their wives to visit the yards. Arrangements have been made to show the system of government inspection and the details of killing and preserving meats at the different plants. The South Side Elevated will run a special train from the Congress Street station on Saturday morning, June 6, at 9 a. m., which will go directly to the plants, and on which there will be no charge for transportation.

THE COMMERCIAL EXHIBIT.

The Exposition of Instruments, Apparatus, Remedial Agents, Literature and Physicians' Supplies at Chicago.

There are probably but few physicians attending medical meetings who fail to visit, and derive pleasure from visiting, the commercial exhibits that have become such an interesting feature of these gatherings. There is something stimulating in seeing the best products of the best firms shown to the best advantage. The surgeon enjoys seeing and handling the finely finished products of the surgical instrument makers' art;



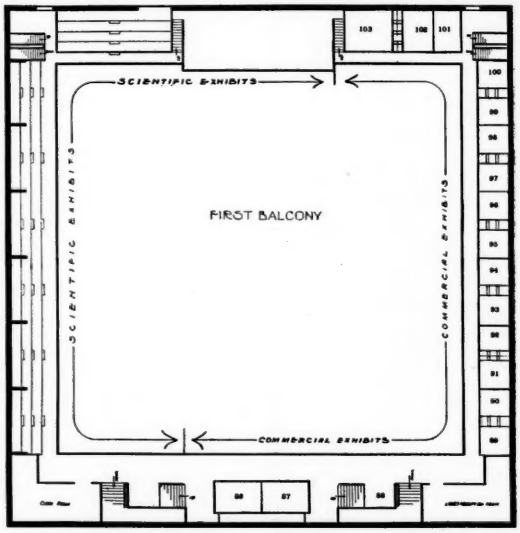
the internist gets satisfaction from the examination of high-grade pharmaceuticals, and all medical men enjoy looking over the choice collections of books that are to be found at these exhibits. With the increased interest taken by the profession in more modern means of locomotion, the automobile and carriage exhibits, which will have a section of the exhibit hall set apart for them, may be counted on to attract no little attention.

The Commercial Exhibit will be under the direct supervision of the officers of the American Medical Association, and the aim has been to make the exhibition excel in quality rather than in size. The exposition will be held in the First Regiment Armory, which is situated at the corner of Michigan Avenue and Sixteenth Street. This building is a handsome and substantial structure, having on the main floor alone over half an acre of floor space. The main floor will be devoted to the commercial exhibits, the Registration Department, Postoffice and the Bureau of Information. The first balcony will have not only part of the commercial exhibit, but the scientific exhibit, the cloak room and the ladies' reception room.

We mention below most of the firms that will be represented at this exhibit.

Albosol Light Company, Philadelphia.—Space 12.

This firm will exhibit and demonstrate its neutral diagnostic light albosol, which, it is claimed, projects an intense white light of about 150 candle-power. It will also show a new and larger size 200 candle-power light, which burns continuously for more than four hours. The valuable feature claimed for



these lights is that they are always ready, and there is no deterioration when not in use. The property of the light is such that it shows true color values. Both lights are adjustable to any position, and are carried in compact cases.

Dr. H. M. Alexander & Company, Marietta, Pa.—Space 61.

The Alexander biologic laboratories will have an extensive exhibit of diphtheria antitoxin, vaccine virus and tuberculins. The immunizing principle of diphtheria antitoxin in the pure state will be compared with the eliminated products from unrefined antitoxin. The recent tuberculins, including the ones for the ophthalmic and cutaneous diagnostic tests, will be on exhibition. The whole exhibit signifies the possibilities of scientific application of biologic knowledge.

W. D. Allison Company, Indianapolis, Ind.—Spaces 28 and 35.

This firm's exhibit of operating and examining tables, instrument, medicine and combination cabinets will show the wonderful progress made in the scientific care exercised by the modern physician in his office practice. Experience has proved the great value that systematic handling of office work has in the care of patients, and this company will show appliances to meet every need of all lines of practice. Experts trained in the handling and the uses of these appliances will be in charge of the exhibit.

Ambulatory Pneumatic Splint Manufacturing Company, Chicago.—Space 55.

The application and use of adjustable pneumatic splints for the various fractures of the lower and upper limbs will be demonstrated by this firm. These splints are claimed to be of practical scientific value, as they are said to afford an ideal, simple, accurate and effective way of setting and holding a fractured limb, whether the patient is treated in or out of bed. These splints will be shown with the patient lying down and walking about, and undoubtedly will attract the attention of everyone who has to do with fractures of the leg, thigh, hip, humerus and forearm.

D. Appleton & Company, New York City.—Space 23.

Among the recent publications that will be shown by this firm are Kelly's "Medical Gynecology," for which 5,000 orders were booked before the date of publication; Foote's "Minor Surgery," another very recent success, more than 5,000 copies having been sold in less than six months; Pusey's "Dermatology" and Babcock's "Diseases of the Lungs," together with a recent monograph by E. L. Keyes, Jr., on "Syphilis."

The Arlington Chemical Company, Yonkers, N. Y.—Space 68.

This company, in addition to an exhibit of its preparation, Liquid Peptonoids, will present to each physician visiting its exhibit a unique and handsome souvenir. The firm's representatives in charge will give a hearty welcome to physicians and will gladly furnish information regarding its products.

Armour & Company, Chicago.—Space 69.

The exhibit of this firm will consist, of course, of the organotherapeutic agents. In addition to the products such as pepsin, pancreatin, thyroids, extract of red bone marrow, suprarenalin and other suprarenal preparations, there will be shown lecithol, which is claimed to be a palatable preparation of the organic phosphorus compound lecithin. Trypsin, also, will be among this firm's exhibited products.

Baker Electric Company, Hartford, Conn.—Space 13.

This company will have on exhibition an entirely new type of static machine. The revolving plates of this machine are made of a patent fibrous material, while the stationary plates are of glass. The manufacturers claim for these fibrous plates the property of high insulation and guarantee them not to warp, crack or scale. They will also exhibit the new self-cleaning Baker nebulizer.

Battle Creek Sanitarium, Battle Creek, Mich.—Space 7.

By means of enlarged photographs the Battle Creek Sanitarium will present a pictorial representation of the various features and departments of the system of physiologic therapeutics which the institution has developed.

Bausch & Lomb Optical Company, Rochester, N. Y.—Space 30.

To the physician who is interested in scientific apparatus and the various instrumental aids to diagnosis this firm's exhibit will prove an attraction. Microscopes, microtomes, centrifuges, incubators, blood apparatus and the numerous other instruments which the modern physician considers essential, will be shown and demonstrated. That great time saver in urinalysis, the centrifuge, will be displayed in a variety of types and styles.

Frank S. Betz Company, Hammond, Ind.—Spaces, 50, 51 and 60.

This firm will have a general display of surgical instruments and a very full line of hospital appliances and electrical apparatus. In addition there will be shown two different kinds of coils besides the Pope galvanic, faradic and sinusoidal cabinet which is said to possess the unique advantage of giving, at the will of the operator, any current that can be obtained from any other battery. The various forms of phototherapeutic lamps will be shown, including the violet ray and the Finsen light.

Edward G. Binz Company, Los Angeles, Cal.—Space 54.

This firm will emphasize by its exhibit the scientific manner in which they claim to distil the oil of eucalyptus. It will illustrate the entire process, showing the natural leaf, branches of the tree, and every step in the evolution from the crude oil to the refined product. The firm's product, euca-mul, made from eucalyptus oil, as well as its eucaloids, which are five minim capsules of the oil, will, of course, be on exhibition.

C. F. Birtman Company, Chicago.—Space 34.

This firm will exhibit a full line of its enamel-coated combination type of static machines which are arranged to be operated by hand or motor power. There will also be shown *x*-ray coils arranged for both the alternating and direct currents, as well as a number of vibrators. Switchboards of marble for galvanic, faradic and sinusoidal currents will be displayed and attention will be called to the firm's international ozonator machine.

P. Blakiston's Son & Company, Philadelphia.—Space 6.

Special attention will be called by this firm to Rodman's "Diseases of the Breast with Special Reference to Cancer." This is said to be the first monograph on the subject by an American surgeon since Gross' work, published twenty-five years ago. Rodman's book is claimed to be of special value as it presents in book form many points of interest by a surgeon whose skill commands attention. Other works of interest will be the second volume of Morris' "Anatomy," Sabin's "Lymphatics," and the third volume of Hardesty's "Nervous System," as well as the fifth volume of Jacobson's "Surgical Anatomy."

Borden's Condensed Milk Company, New York.—Space 103.

This firm exhibits its malted milk, a food product said to be prepared by an improved process whereby all the nutritive elements of the richest, full cream cows' milk and strengthening cereals are scientifically combined. It is manufactured under the best sanitary conditions, is perfectly soluble, and will keep in any climate.

Bramhall, Deane Company, Chicago.—Space 90.

This firm will exhibit sterilizing apparatus for use in hospitals and physicians' offices. The dressings sterilizers are equipped with Deane's self-sealing doors which have no catch or fastening, but which will always maintain a steam-tight joint. The covers of the water sterilizers are equipped with similar doors. Attention will be called to a hydraulic lifting device in connection with the basin sterilizers put out by the firm.

Burroughs Wellcome & Company, New York City.—Space 33.

This firm will display a full line of its Tabloid and Soloid brand of pharmaceuticals. It will also show the analytic and bacteriologic test cases as well as a number of surgical sundries. The B. W. & Co. aseptic glass hypodermic syringe, an instrument that is separable into three parts, will be brought to the attention of visitors.

G. W. Carnrick Company, New York City.—Space 49.

The products of this firm, antithermoline and trypsogen, will be exhibited and descriptive reading matter distributed to physicians. Members of the Association will receive also an appropriate and useful souvenir. The method of packing the preparation, antithermoline, will be brought to the attention of visitors.

Chicago Medical Book Company, Chicago.—Space 4.

This firm is the Chicago agent for Osler's "Modern Medicine," and it will display this most valuable work. The book is a combination of the efforts of some of the best writers and authorities in this country and England, under the editorship of Dr. Osler. A representative display of the latest and best books of all the publishers also will be made.

A. C. Clark & Company, Chicago.—Space 65.

This firm's exhibit will consist of various types of fountain spittoons, including one with a revolving inner bowl and two types with stationary bowls. A novel spittoon, for use where running water is not available, will attract attention. This instrument is called a reservoir and is arranged in such a way that it does not require to be cleaned after each patient. A nitrous oxid gas apparatus, and a tongue depressor which also acts as a saliva ejector, will be among the various articles exhibited.

Clark & Roberts Company, Indianapolis, Ind.—Space 44.

This exhibit will consist of a complete line of surgical furniture for physicians' offices and for hospitals. It is claimed to be especially high grade and all of the articles are designed for well-equipped offices and hospitals. Besides being made in accordance with the latest scientific principles they are designed for thorough asepsis. The finish on the goods and the great care taken with the enameling are two features on which this firm places special stress.

Cleveland Press, Chicago.—Space 83.

"Standard medical books exclusively" is the slogan adopted by this firm. Its exhibit is readily accessible to visitors, who will be made welcome and given every opportunity to examine thoroughly the popular and finely issued books of this young publishing house. In addition to calling attention to special works for which the firm stands sponsor, there will be a general display of its publications.

James B. Clow & Sons, Chicago.—Spaces 86 and 87.

This firm has for the primary object in its display the acquainting of the physician with the great advances that have been made in apparatus for the administration of treatments

in hydrotherapy. There will also be shown some of the latest sanitary fixtures adapted to modern hospital use. Various specimens of this firm's adamantose ware will be exhibited and its properties and advantages explained to visitors.

F. A. Davis Company, Philadelphia.—Space 62.

The exhibit of this firm will contain several new publications of importance. Among them may be mentioned the second volume of Dr. Sajous' work on the "Internal Secretions and Principles of Medicine." The new second edition of Gilliam's "Practical Gynecology," containing an index of regional symptoms, and the new second revised edition of Ott's "Physiology," which has been greatly enlarged, will also be shown, together with Brewer's "Personal Hygiene in Tropical and Semi-Tropical Countries," just issued.

Deimel Linen Mesh Company, New York City.—Space 67.

This company, which was incorporated in 1895 to exploit the fabric invented by Dr. H. L. Deimel, will show all weights and styles of underwear for men, women and children. By a special process of manufacture a soft, warm and porous fabric has been evolved, called "Linen Mesh," which is worn throughout the world. The exhibit will doubtless attract not only the visiting physicians but their wives.

DeVilbiss Manufacturing Company, Toledo, Ohio.—Space 39.

The use of the atomizer and nebulizer in the treatment of diseases of the nose and throat has become very general. How best to accomplish the frequent and thorough cleansing of the mucous surfaces and how to apply the soothing lotion for the assistance of Nature, has been for years past and is now the study of this exhibitor. Every doctor, whether specialist or general practitioner, will doubtless be interested in this company's exhibit.

Electro-Surgical Instrument Company, Rochester, N. Y.—Space 10.

This firm will show a large variety of electrically lighted instruments, cystoscopes, auriscopes, socket current controllers, wall-plates, etc. Especially instructive will be the latest improvements in the Jackson instruments for tracheo-bronchoscopy, esophagoscopy and gastroscopy, all of which are made exclusively by this company. An ingenious device will be shown in the socket cautery transformer, which enables the operator to do cautery work and to light diagnostic lamps with the alternating current, directly from the socket.

Fairchild Brothers & Foster, New York City.—Space 40.

Preparations of the gastric and pancreatic juices will make up the special exhibit of this firm. To physicians interested in the subject of the clinical application of the digestive ferments, this exhibit should prove of great interest. This, too, whether such preparations are to be used as therapeutic agents directly, or in the preparation of foods for the sick, or in the modification of cows' milk to approximate human milk.

Joseph C. Ferguson, Jr., Philadelphia.—Spaces 52 and 59.

This firm, which makes a specialty of the manufacture of eye, ear, nose and throat instruments and supplies, promises to have an interesting exhibit. The particular claim made by J. C. Ferguson is the fact that only instruments of the highest grade and the latest and most improved models will be shown. Specialists in the branches indicated will undoubtedly find much of interest in the display.

Globe Manufacturing Company, Battle Creek, Mich.—Space 63.

This firm will exhibit its complete line of nebulizers and its automatic motor pump for auto tires, vacuum and compressed air supply. The main feature of the exhibit will be a scientific demonstration of vapor vibration in the treatment of diseases of the ear, nose, throat and lungs. By this method it is claimed that any desired medicament may be applied in vapor form under pressure directly to the affected parts with a vibratory action; Dr. Dunlap, the originator of the method, will give the demonstration.

H. W. Gossard Company, Chicago.—Space 88.

This firm will exhibit two styles of corsets, the Gossard and L'Irresistible, both of which have the feature specially brought out by the company—that of lacing in front. The important point to which attention is called is the fact that the lower edge of the Gossard corset reaches the pelvis and distributes the pressure upward from that point giving abdominal support. The fact that these corsets are claimed to produce the same effect as an abdominal binder without making the patient appear unsightly should make them very popular.

F. A. Hardy & Company, Chicago.—Spaces 47, 53, 58 and 64.

Here will be found all the latest and newest designs in surgical instruments and surgical specialties for the eye, ear, nose and throat. The special ophthalmometers made by this firm will be exhibited, as well as its patented illuminating apparatus and other ophthalmologic goods. The dynamometer, a new instrument not previously exhibited, for testing and exercising the muscles of the eye, will be there for demonstration.

Horlick's Malted Milk Company, Racine, Wis.—Spaces 2 and 3.

The exhibit of malt and milk foods of this firm, known as malted milk and malted milk lunch tablets, always attracts attention, since dietetic problems are incessantly forcing themselves on the busy practitioner. Horlick's malted milk in the form of an ice cream, etc., indicates a method of furnishing nutrition and refrigeration to the patient which is said to have received hearty commendation.

W. T. Keener & Company, Chicago.—Space 43.

An important line of new medical books will be shown by this company. Among the more important are Green's "Encyclopedia and Dictionary of Medicine," edited by J. W. Ballantyne, in ten volumes, seven of which are ready, and Carl von Noorden's "Metabolism, the Physiology and Pathology, with its Application to Practical Medicine," which is now complete in three volumes. This firm is the Chicago agent for the W. B. Saunders Company of Philadelphia, and American agent for a number of the leading English publishers.

Kelley-Koett Manufacturing Company, Covington, Ky.—Space 89.

At the exhibit of this firm the Grosse Flamme *x*-ray coil of latest model will be shown and demonstrated by its inventor. There will also be shown for the first time the firm's new compression diaphragm table which embodies many novel features, among which may be mentioned a simple but very accurate means for the localization of foreign bodies in the eye or any part of the human body, and an automatic method for making correct stereoskiagrams without additional apparatus.

The Kryptok Company, Chicago.—Space 66.

This company will exhibit its new fused bifocal lenses. These lenses, under the copyrighted name, "Kryptok," are the original bifocal lenses made by the fusing process. The firm will show the lenses in various stages of manufacture, from the rough slabs of crown glass and the moulded discs of flint glass to the polished finished product. The interest that has been manifested in this type of bifocals will doubtless be reflected in the attention given to this exhibit.

Lea & Febiger, Philadelphia.—Space 9.

Medical literature in every branch will be well represented by this firm, the successors to Lea Brothers & Company. Of particular interest to physicians will be Osler's "Modern Medicine," four volumes now being ready out of the seven which will constitute a complete and authoritative working library reflecting the world's latest knowledge. Similarly the "System of Gynecology, Obstetrics and Pediatrics" covers that group of cognate subjects, but in one volume to each. The long list of other practical works and medical text-books will make the exhibit a most interesting one.

J. B. Lippincott Company, Philadelphia.—Spaces 1, 18 and 19.

A special feature of this firm's exhibit will be a display of the original water-color drawings, many life-size, made direct from the cadaver, for the purpose of illustrating Piersol's "Human Anatomy." Such important works as Pfaundler and Schlossmann's "Diseases of Children," Ortner's "Treatment of Internal Diseases," and Fuch's "Ophthalmology," which have just been published, will be on view. Several important medical books that are scheduled for early publication will also be shown to the profession.

The Malt-Diastase Company, New York City.—Space 11.

This firm makes a specialty of diastasic and unfermented malt products for medicinal and dietetic purposes. It will have on exhibition assayed malt products for medicinal use, that is, its preparations maltzyme and its combinations. The

firm's representatives will be pleased to give information relative to the methods of assay employed in the standardization of maltzyme and, in particular, those used in measuring the hydrolytic power of the amylolytic malt enzymes.

McCray Refrigerator Company, Kendallville, Ind.—Space 56.

An exhibit which will attract attention is that of the McCray refrigerators. Extensive advertising of high-class refrigerators has done much to educate the public against cheap zinc-lined "ice boxes." The particular feature of this firm's refrigerators, aside from their thorough construction and insulation, is the system of air circulation, which provides a strong circulating movement of pure cold air throughout the refrigerator. This current of air keeps the refrigerator free from odor and in a sanitary condition at all times.

McIntosh Battery and Optical Company, Chicago.—Space 78.

A most complete line of galvanic and faradic wall cabinets, alternating current rectifiers and other accessories will be shown in the McIntosh Company's exhibit. A new cautery transformer for direct current will also be one of the specialties receiving attention as well as a very popular type of cautery converter for the alternating current. These appliances will be demonstrated in full working order, enabling the physician to see them in actual operation.

Mellin's Food Company, Boston.—Space 79.

At this exhibit the special feature that will interest physicians is the new publication of the company, the "Mellin's Food Method of Percentage Feeding." This is a book of about 200 pages and it contains tables, with directions for preparing top milks, bottom milks, creams and whey from whole milks, with their analyses; also nearly 500 diet formulas, with analyses and caloric values.

The William Meyer Company, Chicago.—Space 85.

The exhibit of this firm, which is promised to be exceptionally attractive, will consist of a complete line of *x*-ray apparatus, resonators, *x*-ray tubes, galvanic and faradic batteries and plates, cautery apparatus, therapeutic lamps and electrically lighted instruments. Attention also will be called to its rectifiers for the alternating current.

E. B. Meyrowitz, New York City.—Space 38.

There will be exhibited here everything required by the specialist in the diagnosis, treatment and surgery of the eye, ear, nose and throat. The firm will show also an ophthalmometer, several perimeters, Stevens' instruments for testing the ocular muscles, color perception tests as used for railroad and marine service work, and a complete line of operating instruments for the eye, ear, nose and throat. *X*-ray and high-frequency apparatus, which this firm manufactures in a separate department, will be exhibited here also.

Modern Medicine Company, Battle Creek, Mich.—Space 22.

Arc, incandescent and Finsen type therapeutic lamps will be demonstrated at the exhibit of this firm, and an electric light cabinet of the type used in the Battle Creek Sanitarium will be in operation. Electric heating pads, electric blanket packs and the Kellogg douche apparatus, as well as other modern appliances, will be shown.

C. V. Mosby Book and Publishing Company, St. Louis.—Space 84.

One of the most popular and pleasing books put out by this firm, Crossen's "Diagnosis and Treatment of Diseases of Women," will be brought to the fore in this exhibit. This book, which is just off the press, is claimed to be especially adapted to the needs of the general practitioner. Monroe's "Suggestive Therapeutics" is another new book of this firm's which will be brought to the attention of physicians visiting this exhibit. There will also be a general display of medical books.

V. Mueller & Company, Chicago.—Spaces 45 and 46.

The surgical instrument exhibit to be made by this firm will prove interesting to specialists in every branch of surgery. Practical ideas materialized and instruments of the latest construction will be shown. The firm calls special attention to the grade of instruments it manufactures and emphasizes the fact that it is doing its best to cooperate with surgeons by producing instruments in which quality comes before price.

H. K. Mulford Company.—Space 20.

The process of the manufacture of antitoxin by the new method, which separates the antitoxic bearing globulin from the inert serum, will form part of the exhibit of this firm. There will also be an exhibit of bacterial vaccines made according to the method of Sir A. E. Wright, including Koch's tuberculins, both old and new, and their method of preparation; also demonstrations of the preparation of smallpox vaccine. Charts and apparatus will be shown illustrating the subject.

Phœnix Leather Manufacturing Company, Chicago.—Space 57.

A complete line of physicians' leather goods will be shown by this firm. It will comprise such articles as medicine cases, pocket vial cases, instrument cases, emergency, obstetric and surgical bags. Many styles not previously exhibited will be displayed and the firm's representative will be on hand to give any information required.

Rebman Company, New York City.—Space 5.

The high quality of the illustrations, in addition to the subject matter, is a specialty of this firm of medical book publishers and importers. It will show many standard medical books finely illustrated with wood cuts in many colors and lithographs of superior quality and excellence. Special illustrations of the typical surgical diseases will be shown, as well as many standard books on electrotherapy and phototherapy.

Sanitas Food Company, Battle Creek, Mich.—Space 41.

This firm will show the foods used in the Battle Creek diet system. The standardized glutens and nearly fifty other special food preparations, each of which is designed to meet therapeutic indications in various acute and chronic diseases, will be on exhibit. These products will undoubtedly attract the attention of visitors.

W. B. Saunders Company, Philadelphia.—Space 21.

This firm will have an unusually attractive exhibit at the double space just facing the entrance, where its publications may be examined at leisure. Of the new books issued by the Saunders Company during the past year the following are of particular interest: Volumes II and III of Keen's "Surgery," Bandler's "Medical Gynecology," the work on "Bier's Hyperemic Treatment," by Dr. Willy Meyer and Prof. Dr. Victor Schmieden, Campbell's "Surgical Anatomy," Cullen's "Uterine Adenomyoma," Greene and Brooks' work on "Genitourinary Diseases and the Kidney," and others. Advance sheets and illustrations of books in preparation will also be shown.

Scanlan-Morris Company, Madison, Wis.—Spaces 14 and 15.

This company will display its "White Line" of porcelain enamel operating room and office furniture. Great stress is laid on the fact that this porcelain enamel has all the aseptic possibilities of glass, with the additional advantage of being practically indestructible. In connection with this exhibit the Hettinger Bros. Manufacturing Company of Kansas City, Mo., will display a line of surgical instruments, new electric cystoscopic instruments and a high grade of leather goods.

Scheidel-Western X-Ray Coil Company, Chicago.—Spaces 31 and 32.

This firm will exhibit a number of complete *x*-ray and high frequency equipments, among them being this year's model radiographic special compression diaphragm and table. It will also show a new portable *x*-ray equipment for both alternating and direct current. A white enameled hospital outfit will attract attention.

Shelton Electric Company, Chicago.—Space 37.

This firm, which manufactures the Shelton vibrator is preparing a very elaborate booth. It will show some fifteen different makes of electrically driven vibrator apparatuses. The combination of high frequency electricity, combined with vibration, will be one of great interest as it opens a new field in electrotherapeutics. The Shelton vibrators, having taken the grand prize in Paris this year, attract unusual attention.

Schieffelin & Company, New York City.—Space 42.

This firm, in exhibiting the products of the Lederle antitoxin laboratories, will show the various steps in the process of refining and concentrating the serum. A plaster cast of the vaccinated area of a heifer, illustrating the development of the vesicles and their decline after the removal of the virus, will be one of the exhibits. The firm also will have a general display of its pharmaceutical products.

Smith, Kline & French Company, Philadelphia.—Space 24.

This company will have an exhibit of Eskay's Albumenized Food, together with the cereals and raw materials that are used in its manufacture. It will also have demonstration tubes

showing the manner in which the food modifies fresh cows' milk when the latter is brought into contact with gastric juice. Literature regarding the food will be furnished, and a useful souvenir presented to each physician visiting the exhibit.

Spear-Marshall Company, Chicago.—Space 77.

The leucodescent therapeutic lamp which this firm exhibits will, on account of the new features that have been added to the equipment, be an object of interest. This apparatus, it is claimed, is now recognized as a necessary part of every practitioner's armamentarium. Its therapeutic effects and the principles underlying them, will be explained by those in charge of the exhibit. Physicians attending the meeting will doubtless avail themselves of the opportunity to investigate this apparatus.

Truax, Greene & Company, Chicago.—Spaces 27 and 36.

This exhibit, occupying a central position in the hall between the two main aisles, promises to be a most interesting one. A complete line of surgical instruments of standard patterns and many of the later special patterns will be displayed here in attractive form, each line being arranged under its own special classification. The drug department of the firm will have on hand a full line of pharmaceutical preparations of its manufacture.

Victor Electric Company, Chicago.—Spaces 80, 81 and 82.

This firm is providing for a very complete exhibit of its electrotherapeutic apparatus. Among other new electrotherapeutic instruments it will display a line of combination high frequency and *x*-ray equipments. A comparatively small *x*-ray outfit will be one of the novelties shown. The firm intends to demonstrate that as good fluoroscopic vision can be had and as good skiagrams taken with this comparatively small and moderately priced outfit as with the most expensive *x*-ray coils.

R. V. Wagner Company, Chicago.—Space 29.

This company will exhibit its new model mica plate high-tension electric generator, the Wagner *x*-ray compression diaphragm and shield, the new universal wall plate, the Wagner adjustable focus tube for coil and static machine, the Wagner ionizer on stand, the most approved forms of high-frequency electrodes, and electrotherapeutic accessories for wall plates and static machines. The firm will also show some remarkable skiagrams taken by means of its electric high-tension generator.

Henry K. Wampole & Company, Philadelphia.—Spaces 25 and 26.

What is promised to be one of the handsomest displays in the commercial exhibit will be made by this firm, which will show a very full line of standard pharmaceutical products and illustrate the process of manufacture. The mechanical efficiency of the firm's methods will thus be made a matter of demonstration.

Walsh Window Tent Company, Morris, Ill.—Space 100.

A demonstration will be given by this firm of the latest improvements in the methods for obtaining fresh air at night in extreme cold weather. There is a demand on the part of many physicians for something better than the outdoor porch or open windows at night. The Walsh window tent is one of the few attempts made to solve this question. The benefit claimed for the tent is that it saves the energy which in a cold room would go to fight the cold. The tent can be made adjustable to any window or bed.

Welch Grape Juice Company, Westfield, N. Y.—Space 8.

This firm will demonstrate the value of its product by serving grape juice gratis to the visiting physicians. The claim of absolute purity is made for this product, which is manufactured from the unfermented juice of choice Concord grapes. This booth, with its display of grapes and vines, promises to be one of the most artistic in the hall.

William Wood & Company, New York City.—Spaces 16 and 17.

One of the important exhibits made by this firm will be Bryant and Buck's "American Practice of Surgery," said to be one of the most complete expositions of modern American surgery published. An "Index of Treatment," edited by Hutchison, Collier and Coleman in one large volume, will also call for a share of attention. A timely book describing the modern diagnosis and treatment of consumption is Pottenger's "Pulmonary Tuberculosis." Numerous standard text-books and monographs will have their place in this exhibit.

The Year Book Publishers, Chicago.—Space 48.

The Practical Medicine Series of Year Books, which will form the exhibit of this firm, is said to cover all the departments of medical and surgical practice, presenting each year the advances in the different lines together with the current opinion of professional leaders on both the new and the old as given in the medical periodicals of the year. Ten volumes are issued each year, the several volumes appearing at about monthly intervals and treating of different specialties, so that each volume is complete for the year on the subject treated. The books are 12mo in size, with a total of about 3,200 pages, of which about 1,250 pages are devoted to general medicine and surgery.

AUTOMOBILES AND CARRIAGES.

This Exhibit Will be Found in Booths 70 to 76 Inclusive, Along the North Wall of the Main Floor.

The Bendix Company, Chicago.—Space 72.

This firm's four-cylinder, high-wheel cars equipped with its patent twin friction system, will be explained and demonstrated to all interested doctors. A mechanical expert will be in attendance at the booth and the company will have a demonstration car outside of the building. The company also has arranged for visiting doctors to go to the factory if they want to see cars in the actual course of construction. The Bendix as a successful four-cylinder high-wheel car embodies many new and exclusive features.

Buick Motor Company, Chicago.—Space 74.

This firm's physicians' car was brought out late in the season of 1907, and has proved so popular that the company is making a number of the combination coupé runabouts. This car has 22 h.-p. engines, a 91-inch wheel base and 30-inch wheels, fitted with a highly finished coupé, which affords comfort in all kinds of weather, and is simple and easy to control.

Cadillac Automobiles.—Space 73.

This company intends exhibiting two styles of its physicians' special cars. One is its 10 h.-p. runabout, the other a coupé mounted on practically the same chassis. The latter type was designed especially for physicians' use, in order to meet the demand for an enclosed car that would be suitable alike in pleasant weather as well as affording ample protection in cold and disagreeable weather.

Heinzelman Brothers Carriage Company, Belleville, Ill.—Space 75A.

There are a great many shelter-top carriages put on the market of various styles, curtain doors, glass doors, swinging doors, etc. As it is a very difficult matter to select a buggy from photographs or catalogues, this firm will have on exhibition two of its most popular styles, the "No. 17 coupé" and the "No. 23 Dreadnaught." There will be an attendant in charge to demonstrate and explain the many admirable features of its products and present a souvenir to each one who calls.

Holsman Automobile Company, Chicago.—Space 70.

The display of the Holsman automobiles promises to be very interesting. Physicians who desire to get to their patients and back to their offices again with the minimum amount of labor, loss of time and expense will doubtless be anxious to examine these cars carefully. The Holsman people say that over half of their machines are in use by country physicians, to whom the solid rubber tires and high wheels are almost a necessity.

J. V. Lindsley & Company, Chicago.—Space 75.

The Lindsley car which this firm will show is made in three models of runabouts and one model of surrey and combination surrey and runabout. The models shown will have many new exclusive Lindsley features. All parts which go to make up these cars will be shown so that purchasers may see for themselves the quality of each and every component part. One of the inducements offered to purchasers of these cars is the company's guarantee that the car will prove satisfactory under the buyer's own local conditions.